

The Vocational Guidance Quarterly

VOL. 6, NO. 4

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SUMMER 1958

The Vocational Guidance Quarterly

Editor

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Ann Arbor, Michigan



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Summer, 1958



Message from the

PRESIDENT

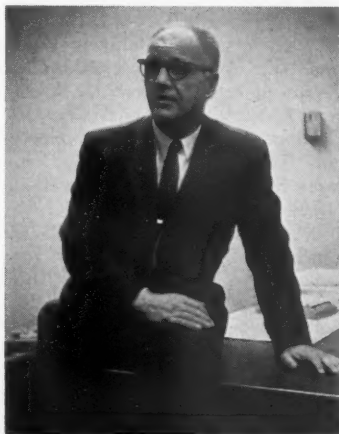
Convention Postscript

St. Louis was the perfect host for the 1958 Convention. The program, attendance, weather, and fellowship were excellent. The National Vocational Guidance Association did its share to make St. Louis a memorable event. Arthur Jones and Harry Kitson were presented with individual awards for their contributions to NVGA and to the guidance movement in general. In addition, the Akron Area Guidance and Personnel Association was presented with the branch award. Further details may be found elsewhere in this issue. Gil Wrenn at the annual NVGA luncheon and Carl Rogers at the last meeting of the convention sponsored by NVGA talked to a full house.

Constitutional Amendments

A few constitutional changes were adopted by the Delegate Assembly—they now await your reaction. Most of them are strictly housecleaning chores. One of them, however, deserves special attention, i.e., the one dealing with the appointment of a treasurer.

John Odgers performed a special service to NVGA in 1957-1958 by reorganizing the budgetary routines. In order to maintain this high standard, the Trustees felt that the Treasurer henceforth should be someone acquainted with financial matters, and he should be carefully selected for his specialized work. You will have the opportunity to vote on this proposal.



Financial Notes

The financial condition of APGA is not all bad news, but it does leave much to be desired. With the critical need for national leadership, it is unfortunate that APGA has both building and budget woes. If members of NVGA are financial wizards, now is the time to exhibit their wizardry.

Membership

NVGA continues to grow in memberships. Ray Charles will again be the Membership Chairman. In one way or another, you may be hearing from him. In the meantime have you secured a new member for NVGA lately? What is your branch doing to assist NVGA's growth in terms of new members?

Suggestions

As usual your officers and trustees will be open to suggestions. If you have any ideas that will enhance the role of NVGA, send them to any of the officers and trustees.

Ed Roeb

1958-1959 NVGA Officers Named

NEW NVGA officers, announced at the St. Louis Convention, are: President, Edward C. Roeb, University of Michigan; President-elect, William C. Cottle, University of Kansas; Secretary, Winifred S. Scott, Vocational Counseling Service, New Haven, Connecticut; Treasurer, Jack Shaw, Colorado State College of Education, Greeley, Colorado.

New trustees are: Harold C. Cottingham, Florida State University; Charles E. Odell, United Auto Workers; and John G. Odgers, Ohio State Department of Education.

Dr. Cottle is Professor of Education and Director of the Guidance Bureau at the University of Kansas



**President-Elect
COTTLE**

in Lawrence. He is a former NVGA trustee and retiring APGA treasurer.

Are Getting Better Every Year!

by W. R. CARTER

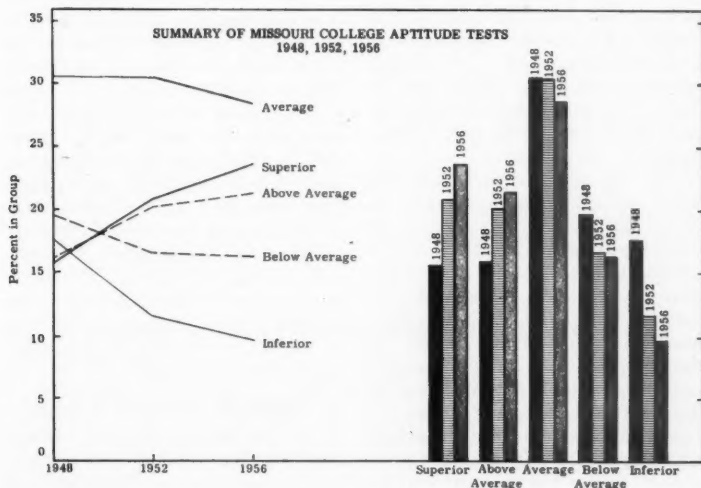
IN AN EFFORT to stimulate the enrollment of better caliber students and to counteract the declining enrollments of the deepest depression years, the University of Missouri began a pre-college advisement program for Missouri high schools 25 years ago. It now seems to be bearing fruit.

Since February, 1933, more than 500,000 high school seniors and other high school students have been tested under the auspices of the Missouri College Aptitude Testing Program.

W. R. CARTER is Professor of Educational Psychology at the University of Missouri.

For many years the Missouri College Aptitude Testing Program has plotted scholarship against intelligence on a quintile chart, or a rough correlation chart, with intelligence (Ohio State University Psychological test percentile rank) plotted on the vertical axis and high school scholarship percentile rank on the horizontal scale.

It is a well-known fact that both intelligence and preceding scholarship are important factors in continued academic success, but it has been clearly demonstrated in all the studies at the University of Missouri that a combination of the two measured on the 25 areas of a quintile chart provides a much bet-



ter prediction than either measure alone.

College Potential Estimated

For example, students who rate in the top 20 per cent of high school seniors in intelligence have all too often been judged to be of about equal potentiality for college careers. But, if one breaks down the top quintile into scholarship ratings, one finds that the brightest 20 per cent of high school graduates who do go to college may have ranged all the way from the lowest quintile in scholarship to the highest. Of course, a great majority will show a high order of scholarship.

The one to one-and-a-half per cent of the native Missouri college freshmen who have ranked in the bottom quintile in scholarship in spite of a highest quintile rating in intelligence have practically no possibilities as college students. Again, out of this high-ranking group in intelligence, the University generally finds that from one-and-a-half to two-and-a-half per cent of the freshman class range from a 21 percentile rank to a 40 percentile rank in high school scholarship. Only about one in five of this group survives the first year at the University with average grades.

Likewise, the University of Missouri freshman group generally includes about three per cent of its freshman population with only a middle quintile rating in scholarship in the high school and, in spite of their high (top quintile) intelligence, only about one-half of these freshmen maintain average passing grades. Again, from six per cent to nine per cent of the typical native Missouri freshmen group at the University have placed in the top quintile on the

Ohio test but have ranked above only 61 to 80 per cent of their fellows in scholarship in the high school. Only about 58 to 65 per cent of these students maintain at least an average grade of M for a year at the University.

On the other hand, students who have a background of the highest quintile rating of both intelligence and scholarship in the high school succeed much better and about 86 to 92 per cent of them have grade averages of M or better. The advantages of the combination of quintile ratings in both scholarship and intelligence in the high school are obvious in predicting the future academic success of the freshman.

Many Scholarships Awarded

In 1950 the Board of Curators of the University of Missouri authorized the awarding of 625 scholarships for the benefit of the highest ranking students in Missouri high school classes. The scholarships provided for library, hospital, and incidental fees, and next year will have a value of \$180. The scholarship will continue for the second year for 125 recipients who make the highest grades in the University.

Certificates of Recognition are sent to every senior in the state who ranks in the top one-fourth in both scholarship and intelligence. Just more than 3,900 Missouri high school seniors received these Certificates of Recognition for the school year of 1956-1957. Partly as a result of this stimulation, the caliber of native Missouri freshmen in the University has been steadily increasing since 1950.

Aptitude Traced 8 Years

In December, 1957, the College Aptitude Testing Program released a bulletin indicating the extent of

the improvement in the quality of entering freshmen for the past eight years.

For the fall of 1956, the University freshman class included 40 per cent more students as compared with the 1948 freshman class, in the group which, in the high school, ranked in the top 40 per cent in both intelligence and scholarship. The 1956 freshman class had about seven per cent more of this caliber than did even the 1952 class.

For the group which ranked in the top 20 per cent in both measures, the 1956 class had one and one-half times as many students in terms of percentages of the respective groups at this level. The 1956 freshman group had 14 per cent more of the top 20 per cent caliber than did the 1952 group.

The University has a corresponding decrease in the percentages of inferior students who ranked in the lowest 40 per cent in both intelligence and scholarship. The 1956 class had 44 per cent fewer of these low caliber students than did the 1948 freshman class.

In the past it has not been unusual to find about ten to twelve per cent of native Missouri freshmen enrolling in the University with a background which places them in the lowest 20 per cent in scholarship in their high schools. Only 7.8 per cent of the 1956 freshman class rated in this lowest quintile.

Even the "just average" prospects were nearly seven per cent fewer in 1956 than in 1948, and the below average and inferior groups included 16 per cent fewer and 50 per cent fewer students, respectively.

Possible Explanations Given

By way of summary, about 36 per cent of native Missouri freshmen would merit excellent and superior grades on the same standards that would have produced about 24 per cent achieving superior and excellent grades in 1948. Judged by the same standards, there should be fewer than one-half as many inferior and failing students.

Credit for this significant improvement in the educational potential of the native Missouri freshman group goes, without doubt, to the financial assistance offered by the 750 freshman and sophomore Curators' Scholarships and to an increase in trained guidance workers in Missouri high schools from 14 workers in 1948 to more than 300 in 1956.

There has been a significant increase in the training and effectiveness of teachers, supervisors, and administrators as well as of the guidance workers in Missouri schools. The significance of the influence of Missouri's guidance workers cannot be overemphasized in this continuing improvement in the caliber of University freshmen.

• • • Employment Outlook in Engineering • • •

Engineering is one of the largest and most rapidly growing professional occupations in the United States, according to information presented in the 1957 edition of the *Occupational Outlook Handbook*, issued by the U. S. Department of Labor's Bureau of Labor Statistics. In 1956, there were approximately 700,000 engineers, an increase of a third over 1950.

INCREASING recognition is being given to the value of multifactor test batteries in vocational counseling.

This is due in part to the current emphasis on the identification of persons with high potentialities and the recent excellent series of articles in the *APGA Personnel and Guidance Journal* concerning these tests. In these articles, the construction, normative data, reliability, validity, etc., of the tests are fully explained but the actual use of the tests in a counseling situation is not stressed in detail [2].

The purpose of this article is to indicate how one multifactor test, the General Aptitude Test Battery, is used by the Florida State Employment Service in employment counseling interviews.

Nine Aptitudes Involved

The GATB yields a measure of nine aptitudes. They are: intelligence (G), verbal (V), numerical (N), and spatial aptitude (S), form perception (P), clerical perception (Q), motor coordination (K), finger dexterity (F), and manual dexterity (M).

The occupational norms which are used by the counselor in interpreting scores made on these aptitudes are expressed in terms of occupational aptitude patterns, or OAP's [1]. These patterns represent families of occupations which are similar in their aptitudinal requirements.

For example, if a counselee scores at least 105 on G (intelli-

by JOHN E. HAY

gence), 95 on N (numerical aptitude), and 95 on S (spatial aptitude), he qualifies for OAP #4. A score of 100 represents the 50th percentile. Occupations in this pattern or family include, among others, architectural draftsman, mechanical draftsman, tool and die maker, and electrician.

At present, there are 23 patterns which cover over 500 occupations. This grouping of occupations into patterns helps the counselor in matching a counselee's aptitudes with the requirements of a wide range of occupations.

In the counseling interview, the counselor does not start with a discussion of the OAP's for which an applicant qualified, however. To begin with occupations within OAP's would "short circuit" the interview and prevent exploration of fields of work in which the applicant might have greater interests (the OAP's do not cover all occupations).

Survey Precedes Patterns

The starting place is found in a broad survey covering a range of occupations such as the USES (United States Employment Service) Interest Check List. This assures that all possible suitable occupations or fields of work in which

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The GATB at Work **IN VOCATIONAL COUNSELING**

the counselee has interest will be identified. The counselor also reviews with the counselee his stated interest, full and part-time work experience, education and training, school record, hobbies, family occupations, and personal traits, to identify clues for possible suitable occupations. This can be called the "identification" step.

The next step is to check the alphabetical index which lists all occupations covered by OAP's. If occupations identified as possibilities by the above methods are included in the patterns, the counselor determines whether the counselee meets the norms. Occupations for which the norms are not met are usually not considered further, unless other factors, such as strong motivation, compensate for deficiency in aptitude.

Thirdly, the occupations in OAP's for which the counselee qualified are reviewed by the counselor to locate other feasible job choices and thus broaden the possible outlets. The counselor discusses these occupations with the counselee using resource materials such as the *Occupational Outlook Handbook* [6], Part IV of the *Dictionary of Occupational Titles* [5], the *USES and Florida Job Guide for Young Workers* [3], to give the counselee additional information about the occupation in which he is particularly interested. First consideration is given to those patterns requiring the highest qualifying scores. This is to assure maximum utilization of the counselee's abilities for the benefit of both himself and society.

Test Profile Reviewed

If no OAP's are met, or if the patterns met are not suitable or acceptable to the counselee, the

counselee's test profile of the nine aptitudes is reviewed by the counselor for its possible occupational significance.

Caution must be used in this process since objective information on the aptitude requirements of the jobs concerned is not available. Success depends on the counselor's knowledge of the occupations and sound judgment of the degrees of various aptitudes required. A high verbal score, for example, may suggest occupations involving written or spoken language such as script-writer or radio announcer; a high form perception score might suggest occupations involving inspection or grading of materials.

Clusters of certain scores can be useful, too. For example, a tendency for scores to be higher on the C, V, N side of the profile indicates possibilities of professional, clerical, and other "white collar" occupations of varying levels.

Higher scores at the K, F, M side indicate manipulative work. Higher scores in the S, P, Q section indicate perceptual factors which may be useful in mechanical and clerical tasks of many kinds. The *Estimates of Worker Trait Requirements for 4,000 Jobs* will help the counselor in determining the significant aptitudes associated with various occupations [4].

If all of the aptitude scores are quite low, it may be well to avoid all fields of work involving aptitudes in the GATB sense and concentrate on possibilities of fields involving personal relationships such as non-technical sales, or personal service, or gross manual jobs such as represented by many laborer and non-personal service jobs.

If the profile is reviewed with the counselee, individual aptitudes are

interpreted in terms of apparently suitable fields of work since most counselees are not familiar with standard scores of percentiles.

Narrowing Is Necessary

The last step in GATB interpretation may be called the "narrowing" step. This is necessary since the counselee cannot enter all of the occupations identified by steps one and three above. Some occupations eliminate themselves quickly. Heavy jobs usually are not suitable for women and older men; some occupations cannot be performed by persons with specific handicaps; some jobs, such as plumber, are typically performed by men, and others such as key punch operator, by women.

Other factors besides strength, sex, and a physical handicap which may narrow the field are the advancement opportunities and the occupational outlook of the occupation, the ability of the counselee to finance training, the counselee's temperament and self concept, parental attitudes, minimum income required, whether or not the counselee can leave the community, etc.

When the occupational goal is established, a vocational plan which assists the counselee to enter the vocation is mutually developed by the counselee and counselor. This may involve training or education, referral to an agency, stop-gap or part-time employment, or other possibilities.

Interpretation Summarized

To summarize, the main steps in interpreting the GATB are:

1. Identify possible suitable occupations by talking with the counselee about his interests and background.

2. Check alphabetical index to GATB to determine whether counselee meets norms of occupations identified above.

3. Broaden the field by discussing jobs covered by OAP's successfully met.

4. Review the test profile for possible occupational significance of the OAP's are unsuitable or if none are met.

5. Narrow the field.

6. Develop a vocational plan.

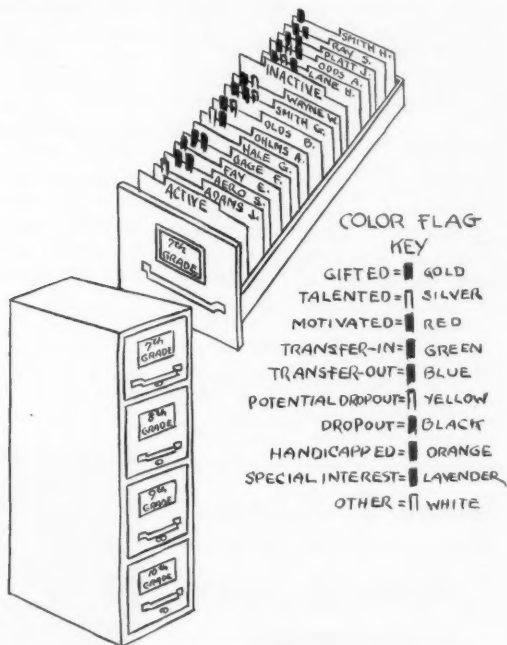
Counselors experienced in using the GATB may feel that the above procedure oversimplifies the interpretation process since the steps may overlap. For example, some "narrowing" (step 5) may take place in step 3, when the counselor is discussing jobs covered by OAP's with the counselee. However, vocational counselors unfamiliar with the use of the battery in counseling may find the above procedures of value in their initial encounter with the GATB.

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Flagging the Files

by LOU UTTER



THERE are at least four main reasons for flagging cumulative record folders. By so doing a counselor is able to:

- pin-point pupil characteristics so that the counselor can easily spot them,
- plan specific guidance services for each pupil,
- plan interpretive services for teachers and parents, and
- further the systematic study of pupils.

The flagging of folders is one part of the overall action taken in

developing individual analysis and synthesis, a standard guidance service.

In this process the counselor is concerned with finding out about each pupil's strength and weaknesses, namely: interest, abilities, talents, achievements, motivations, potentialities, and personal characteristics. After the counselor has identified these pupil characteristics to the best of his ability, he

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is in an optimum position to provide a sound guidance service for pupils, parents, and teachers.

The flagging of folders is a technique of identification. The mechanics are simple.

The content of each pupil's folder is studied to find out what his characteristics are. When they have been determined, color flags are selected which represent these traits. Color flags are then attached to the pupil's folder. They are of a clip-on or adhesive material, available commercially.

The date when the flag is attached to the folder is also noted at the base of the flag. One pupil might have one or more flag stickers attached to his folder.

Filing Is Important

Filing of cumulative records in a business-like way is essential. One standard filing case with four

drawers can house the records of pupils in four grades of a small or medium-sized high school.

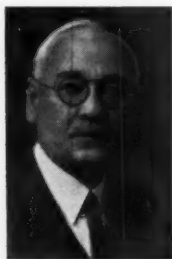
Each file drawer represents a grade level. For example, the 7th grade file drawer houses the active and inactive records of pupils registered in a specific grade. The active records represent pupils who currently are attending school and the inactive records represent pupils who have involuntarily and voluntarily left school.

Records maintained intact year by year in this manner make it easy for the counselor to compute holding power or dropout totals for a particular group.

The flagging of cumulative record folders for identification purposes and the filing of folders in active or inactive categories set the stage for the real use of records by the counselor.

Harry D. Kitson ▷

Arthur J. Jones



IN EARLIER YEARS: Pictured above as remembered by hundreds of graduate students and members of the guidance and personnel profession are, left, Dr. Arthur J. Jones, now 87, and Dr. Harry Dexter Kitson, born in 1886.

Both are former presidents of NVGA. They were awarded the first annual NVGA Meritorious Service Awards.

DOES COUNSELING CHANGE

Perception of Interest?

by JOHN A. STERN, ETHEL H. LEWIS, and L. L. BEVER

IN REVIEWING the literature concerned with the general problem of the effect of counseling on self-knowledge, we find that most of the studies were performed on either college students [1, 4] or on high school students [2, 3, 5], and that the effect of counseling was dissipated within an alarmingly short time.

The present investigation extends the study of this problem to not only an older population, but what is more important, to a population that is having difficulty in arriving at a decision concerning a vocational choice.

The above studies indicate that, at least in the area of interest testing, clients seem to profit somewhat from having been exposed to the counseling process. The results for abilities and measures of personality are much more equivocal; indeed, most of them are negative. In most cases involving changes in perception of interests as a function of counseling, the discrepancy between the actual scores and recalled performance was low. In fact, low enough to make one suspect that we, as counselors, have not yet struck rich paydirt in the

area of most effectively imparting to our clients information garnered from tests.

Working within a counseling and guidance center, one often encounters clients who have taken a variety of interest and aptitude tests during their school training without having had the results of these tests explained to them. When one questions the usefulness or wastefulness of such procedures, one occasionally hears the argument that the process of taking a test is in itself often helpful in aiding students to make decisions about vocations, future schooling, etc.

The present research was undertaken, in part, with the aim of finding out whether the taking of a vocational interest test in itself helps a person to make a more adequate evaluation of his interests. We also investigated the question of whether the information imparted to a client during counseling is more successfully retained by clients experiencing vocational dissatisfaction than had been reported in previous studies in which high school and college students were the subjects.

In the present study, clients at varying stages of counseling were asked to rank their interests from most to least liked, using the interest areas of the Kuder Preference Record. These ratings were made prior to taking the Kuder Preference Record; after taking the test,

JOHN A. STERN is Director of the Behavior Research Laboratory, Department of Psychiatry and Neurology, Washington University Medical School in St. Louis; ETHEL H. LEWIS is and L. L. BEVER (deceased) was with the Metropolitan Y.M.C.A. Counseling and Guidance Service of St. Louis and St. Louis County, Missouri.

but before information about the results had been revealed to them (usually 7-14 days after first rating); and, 6-12 months after counseling.

The subjects of this study were 52 males who had come to the Y.M.C.A. Counseling Service because of a variety of problems, most of them vocational in nature. Age distribution of the sample showed 41% to be between the ages of 18-24; 23% between 25-29; 14% between 30-34; and 22% older than 35 years. The subjects used in this sample are thus considerably older than the ones in the earlier mentioned studies. Since these people were experiencing vocational problems, one would also suspect that their motivation, both in taking the tests and in retaining the information obtained from testing and counseling, would be higher than that found in either high school or college students.

Results

Four sets of rankings of the interest patterns were obtained.

- I. ranking of interest areas prior to taking the Kuder
- II. ranking of interest areas after taking the Kuder, but prior to being informed on the results
- III. actual pattern obtained on the Kuder

- IV. pattern of interest obtained 6-12 months after test interpretation

Since all of the subjects did not participate in all four phases of the study, the number of cases varies from comparison to comparison. The lowest number of subjects was available from the follow-up study conducted by mail. A questionnaire was sent to each individual participating in the study with the request for a variety of information, with evaluation of interest being only one part of the questionnaire.

Rank order correlations for each individual were computed; the mean and median of these results are presented in Table I.

The highest correlation proved to be the one between the actual test pattern and that obtained by the post-test follow-up, while the lowest correlations were the ones involving comparisons of interest patterns prior to knowledge of results with the actual test results.

Tests of significance between various sets of correlations were run although the results of this procedure are open to the criticism that the correlations are not normally distributed. There was a marked skewing of the distribu-

TABLE I
Correlations Between Patterns

Correlation Between	Number of Subjects	Median Correlation	Mean Correlation	Standard Deviation
I and II*	34	.88	.81	.16
II and III	43	.58	.61	.21
I and III	37	.53	.56	.21
I and IV	20	.83	.81	.13
III and IV	25	.98	.94	.11

*I—ranking interest prior to taking Kuder

II—after taking test, but before in-

terpretation

III—test results on Kuder

IV—6-12 month follow-up

tion toward the upper range of correlations, especially in comparison between the actual Kuder score and the follow-up measure, as well as between the two estimates of interest prior to being informed of test results. These tests of significance indicate that significant changes in estimation of interest patterns occur as a function of counseling.

Discussion

The results of this study indicate that the taking of a vocational interest test is, in itself, of little value in helping a person make a more adequate appraisal of his interests. Looking at the correlations between the two interest patterns given by the subjects prior to test interpretation, we find it to be the second highest in our table of correlations, exceeded only by the correlation between test results and the 6-12 month follow-up. This, as well as the low correlations between the two pre-interpretation interest patterns with the pattern derived from the Kuder Interest Inventory, would indicate that the interest pattern was quite stable from first to second testing, and that both patterns gave a low, although significant correlation with actual test scores.

The correlations obtained between pre-test ratings and performance on the Kuder Preference Record are similar to those reported by Berdie [1]. His data were obtained on a college population and a different measure of interest was utilized (Strong Vocational Interest Blank); nevertheless, his median correlation between test and pre-test measure was 0.46, which compared favorably to our median correlation of 0.53. There the similarity in results ends. His comparisons of

post-test ratings with test performance indicates a slight but insignificant increase in the correlation (0.51). Our tests, on the other hand, show a highly significant increase, the median correlation shifting from 0.53 to 0.98.

It seems plausible, at least to us, to attribute the significant shift on the part of our clients to the fact that their motivation for taking the test (which is part of a battery of interest, aptitude, and personality tests) as well as their willingness to accept results were higher than that found amongst college students taking interest and achievement tests as part of a standard testing program. The present subjects were actively seeking help in making decisions about entering or changing vocations. They were undecided about their future and welcomed the test results and interpretations provided.

That the testing and counseling of persons such as those reported in this study is of value toward getting them to realistically look at themselves, to evaluate their interests and abilities, and where necessary to make changes in their career or studies is borne out by the continual feed-back we get from clients who have been counseled in our service. Many of them have gone on to "better" and more personally satisfying careers. Some, of course, have not been helped.

Another indicator of the value of counseling in fostering better mental health in clients is the fact that of the various referral sources through which people come to us none contribute more than ex-cipients of our service, apparently these people have been helped by our evaluation and counseling.

Furthermore, one might suspect, that they are making use of the information provided by the testing

program and thus were reinforcing the one or two trial learning that had been provided during counseling.

The much higher retention of material learned during the counseling interviews in our sample as compared to the previously reviewed work with college and high school students indicates to us the great importance or motivation in learning and retention. Unless a person is motivated to make changes in himself all the vocational counseling and testing, as well as psychotherapy, in the world will make little impact on him. Where he is well motivated, and the motivation can often be extrinsic, such as dismissal from a job, failure in program of study at school, etc., counseling is often able to take hold and help the person help himself. Whether extrinsic motivation is as useful in psychotherapy is questionable.

There could, of course, be the possibility that the high correlation between Kuder score and the 6-12 month follow-up was due to extraneous factors. For example, counselees might have had the opportunity to write down information given by the counselors. This practice was uniformly discouraged by telling the clients that we were interested in getting the information into their heads rather than on a piece of paper. None of them took notes during the counseling interview.

Because the results we obtained were only from those people who were willing to return the questionnaire, we cannot rule out the possibility that our 6-12 month follow-

up was highly selective. However, in terms of the responses to questions dealing with suggestions for improving service, evaluation of effectiveness of counseling, cost of counseling, and general comments, we feel that we did not tap only those who were favorable to our counseling and those who had been helped. Some of the clients were highly critical about our procedures and its effectiveness in helping them to make some decisions about their future.

Conclusion

The results of this study thus show that counseling, at least in the area of making decisions about interests, is highly effective with people coming to a vocational guidance center. We feel, that due to the higher level of motivation of such people as compared to high school seniors and college freshmen the results in other areas of vocational counseling may also prove to be more rewarding.

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Watch for the 1959 APGA Convention to be held in Cleveland on March 23-26. Records set in St. Louis may be broken.

Educational Attainment and Interest Patterns

by STANFORD H. GLAZER

DOES EDUCATIONAL attainment really affect interest patterns? This investigation gives part of the answer.

The design used in this study was comparatively simple. The names of 335 persons who had completed counseling at the Wayne State University Veterans Guidance Center were taken from an alphabetical listing. Three sets of figures were then recorded for each individual: (1) the amount of education completed, (2) the percentile score attained on an *Otis S. A. Test of Mental Ability-Higher Form A.*, and (3) the three high percentile scores on *Kuder Preference Record-Form BB.* The "Col-

lege Student" norm was used throughout in recording the *Kuder* scores. These two instruments were used because of their availability.

Several methods were tried before establishing proper educational groupings. Essentially, it was found that a broad grouping was best. Consequently the 335 individuals were divided into three categories: (1) those who had not completed high school, (2) those who were high school graduates, but had no training beyond, and (3) those who were high school graduates and who had completed some college work. This was felt to be the easiest and most accurate

TABLE 1

The Mean Percentile Score and Total Number of Responses for Non-High School Graduates as Recorded on the Kuder Preference Record

Area of Interest	Total Number of Responses	Mean Score	Rank of Responses	Rank of Mean Score
Mechanical	26	85.54	2	1
Computational	23	83.13	4-5	5
Scientific	18	85.50	8	2
Persuasive	23	80.87	4-5	8
Artistic	38	85.48	1	3
Literary	16	84.06	9	4
Musical	22	81.64	6-7	7
Social Service	22	82.73	6-7	6
Clerical	25	80.31	3	9
Total Number in Group-71			Total Kuder Responses-213	

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manner of presentation in view of available data.

Certain terms which are characteristic of this study must also be

defined. The term "response" refers to a high interest score recorded on the *Kuder Preference Record-Form BB*. The term "Rank" is used to denote the numerical position of a specific interest area in comparison to the eight other areas. As an illustration each of the three high scores recorded for each person constitute a "Response." The percentile score of each would determine its comparative "Rank."

The data which follow are presented in both descriptive and numerical form.

Non-High School Graduates

The number of persons in the Non-High School Graduate Group totaled 71. Their combined mean percentile score on the *Otis-SA Test of Mental Ability* was 21.16.

The numerical interest pattern for this group as measured by total "responses" is as follows: Artistic

High School Graduates

One hundred and sixty-four individuals fell in this group. They attained a mean percentile score of 42.38 on the *Otis-SA Test of Mental Ability* which was slightly more than double the score attained by the Non-High School Graduate Group.

The Persuasive interest area with 74 responses ranked highest numerically with this group and was followed by the Musical area with 72 and the Social Service with 56. The three highest mean percentile scores for this group were the Social Service (89.41), Persuasive (89.04), and the Clerical (88.65).

College Student Group

One hundred persons of the total 335 studied had some college training at the time the figures were compiled. The combined mean percentile score on the *Otis-SA Test of Mental Ability* for this

TABLE 2

The Mean Percentile Score and the Total Number of Responses for High School Graduates as Recorded on the *Kuder Preference Record*

Area of Interest	Total Responses	Mean Score	Rank of Responses	Rank of Mean Score
Mechanical	43	83.26	8-9	8
Computational	43	88.63	8-9	4
Scientific	48	81.21	7	9
Persuasive	74	89.04	1	2
Artistic	54	86.62	4	6
Literary	50	88.02	6	5
Musical	72	84.45	2	7
Social Service	56	89.41	3	1
Clerical	52	88.65	5	3
Total number in Group—164			Total Kuder Responses—492	

(38), Mechanical (26), and Clerical (25). The degree of interest as manifest by combined mean percentile score shows that the Mechanical, Scientific, and Artistic were highest with respective mean scores of 85.54, 85.50, and 85.48.

group was 56.82 which represents an increase of 13.44 percentile points over the High School Graduate Group.

In interests, the numerical leaders for the College Student Group were Persuasive with 47 responses,

TABLE 3

The Mean Percentile Score and the Total Number of Responses for College Students as Recorded on the Kuder Preference Record

Area of Interest	Total Responses	Mean Score	Rank of Responses	Rank of Mean Score
Mechanical	22	82.36	8	9
Computational	31	88.65	5	2
Scientific	29	86.10	7	6
Persuasive	47	90.00	1	1
Artistic	30	87.57	6	5
Literary	39	87.95	4	3
Musical	42	84.81	3	8
Social Service	44	87.84	2	4
Clerical	16	85.44	9	7
Total Number in Group—100			Total Kuder Responses—300	

Social Service with 44 and Musical with 42. The highest mean percentile score was recorded in the Persuasive area, also the numerical leader, with a score of 90.00. This, incidentally, was the only mean percentile score to fall in the 90th percentile. The Computational area was next with a mean percentile score of 88.65, followed by the Literary interest area with a score of 87.95.

Conclusions and Implications

The conclusions from this study can be summarized as follows:

1. The three groups do present a variance in interest pattern, suggesting that educational attainment might be an influencing factor in this respect. The difference between the Non-High School Graduate and the other groups is the most striking. The Non-High School Graduates indicate a much higher interest in the mechanical and artistic areas and a much lower interest in those areas which we associate with verbal activity (persuasive and social service).

2. The similarity of interests between the two higher level groups is rather marked. Yet here also, it must be noted that there are char-

acteristics of difference. In the college group, especially, there are certain interests indicated that seem to reflect specialized training offered at that level. This is particularly true of such fields as the Computational and Literary. To a lesser extent programs may be offered at the high school level in these fields, but not to the intensive degree of specialization which is characteristic of the college level.

3. Intelligence scores, at least as measured by the *Otic-SA Test of Mental Ability*, appear to be dependent upon the amount of education completed. This is evidenced in the mean score of 21.16 made by the Non-High School Graduate and as contrasted by the higher scores of 42.38 made by the High School Graduate Group and the mean score of 56.82 made by the College Students.

In conclusion then, it might be said that the results of this study suggest that there is a difference of interests as reflected in the different educational groups. The greatest contrast would seem to come between those who have completed high school and those who have not. The similarity of interests between high school graduates and college

students seems to be fairly close. It would also appear that scores made on intelligence tests and level of educational attainment are related.

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In July, 1957, an estimated 3.5 million workers held two or more jobs, according to the Bureau of Census.

Sources of Technician Supply in the Soviet Union*

RUSSIAN semi-professional workers are trained in technicums, or "middle special schools." Currently, there are about 3,800 technicums for all types of semi-professional training. The schools are financed by the various industry ministries (e.g., coal), which are vitally interested in assuring a trained supply of technicians to maintain output in their fields. Soviet semi-professional training is extremely specialized and is aimed at producing workers who are limited to one occupational field.

Students who have completed 10 years of schooling (7 years, for superior students) are accepted by technicums. Those with 10 years of schooling, that is, those who have finished their secondary school education, may graduate in less than the 4 years ordinarily required. The engineering technicums are the chief source of supply for the semi-professional technical workers in industry, who are the sole concern of this analysis. Most students enter the engineering technicums between the ages of 14 and 17 and finish their training between 18 and 22 years of age. Tuition fees, instituted in 1940, are offset for promising students by special scholarships and maintenance grants. The Government gives special advantages to engineering students by paying them larger stipends than are paid to students in other fields. Workers are also encouraged to enroll in evening or correspondence courses leading to a semi-professional certificate by being given liberalized leave privileges for taking examinations.

* Excerpt from "Technicians in the Labor Force of Russia and America" by Howard Rosen in the January 1958 *Monthly Labor Review*, U. S. Reprint No. 2274.

JOB ORDERS

for Guidance

and Personnel Workers

by

NANCY D. STEVENS

and

ROBERT HOPPOCK

THIS ARTICLE is a summary of job orders for persons trained in guidance and personnel work, received by the Education Division of the office of Placement Services at New York University between January 1, 1957 and December 31, 1957.

There were in all 303 job orders for positions distributed in the following institutions and agencies:

Colleges and universities	74
All schools in one district	4
Secondary schools	179

Elementary schools	14
Other organizations	32

Geographically, these job orders came from:

New York	103
New Jersey	39
Connecticut	22
California	10
Other states	129

Job Orders Categorized

Listed below are the principal job categories and the number of job orders received:

College and university

Counselor trainers.	19
Administrators. Directors of student personnel, directors of counseling.	14
Counselors. In admissions, placement, residence. For educational and vocational guidance and in laboratory schools.	14
Directors and assistant directors of counseling	2
Directors of residence, supervisors of residence, educational and social directors.	18
Directors of student activities and related jobs.	7

Public schools

Directors of pupil personnel services, directors of guidance, head counselor for	
Secondary schools	29
Elementary schools	1
All schools in one district	4
Counselors in	
Secondary schools	48
Elementary schools	14
All schools in one district	1
Grade level not stated	68

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- Teacher-Counselors in
 Secondary schools 13
 Elementary schools 0
 All schools in one district 0
 Other jobs for which guidance training was specified: 5
 Attendance officers, attendance supervisors.
- Other organizations.* Jobs for which guidance training was specified.
- Vocational rehabilitation, and placement counselors in social agencies. 17
- Directors, supervisors of training, directors and supervisors of workshops, assistant and field secretaries, guidance specialists in social agencies. 7
- Residence counselor parents, house-parents, residence counselors in agency sponsored residence centers 8

Salary Range Reported

For public school jobs, salaries were usually reported on a sliding scale related to the training and experience of the worker. Counselors

were paid sometimes the same as teachers, sometimes from \$200 to \$600 above the teachers scale.

Directors of guidance were paid from \$3,700 to \$8,250 with most of them between \$4,000 and \$6,500.

College salaries ranged from \$2,000 to \$9,000 with most of them between \$4,000 and \$6,500.

Jobs in agencies paid from \$2,500 to \$7,560 with most of them between \$4,000 and \$6,500.

Training Levels Set

Nearly all job specifications included a master's degree in guidance. Exceptions were the jobs for counselor trainers in which the doctorate was preferred; and the beginning jobs in student activities, residence halls, where the bachelor's degree was often acceptable.

1956, 1957 Compared

A comparison with job orders received in 1956 reveals the following changes:

Job orders from community agencies, other than schools and colleges, decreased from 79 to 32.



Job orders for counselors in elementary schools increased from 3 to 14.

Job orders for counselor trainers on the college level increased from 11 to 19.

Meet NVGA Secretary

WINIFRED S. SCOTT

SINCE July, 1945, Winifred S. Scott has been senior counselor and chief psychologist at Vocational Counseling Service, Incorporated, New Haven, Connecticut. Her duties have emphasized counseling private clients; administering and interpreting projective personality tests, primarily in the evaluation of applicants or employees referred by industry; and providing psychological services to school systems.

She has been commuting to New Haven on a part-time basis since she and her husband, NVGA Trustee C. Winfield Scott, moved to New Brunswick, New Jersey last September. Her present plan is to serve V.C.S. only as a counselor trainer consultant this coming year, and then to stop commuting.

Dr. Scott has also been the psychologist in a child guidance clinic for eight years.

She grew up in Iowa City, Iowa, and graduated from the State University of Iowa where her parents were for many years on the faculty, her father as head of the philosophy department and her mother as faculty member of the school of music. Dr. Scott did her master's work in the psychology department of Columbia University, and qualified for the Ph.D. degree at Teachers College, Columbia University, where she assisted Dr. Leta S. Hollingworth and did her doctoral study under Dr. Hollingworth's supervision.

For many years Dr. Scott has been a professional member of the National Vocational Guidance Association. She was a member of the Delegate Assembly of both NVGA and APGA in 1958 and will serve in the Assembly of the latter again in 1959.

Dr. Scott is a Fellow in the Divisions of Counseling Psychology and of School Psychology of the American Psychological Association, and a member of the APA Division



**Secretary
Scott**

of Clinical Psychology and of the American Orthopsychiatric Association. For six years she served as secretary-treasurer, and in 1957 as president of the Connecticut State Psychological Society.

A Certified Psychologist in Connecticut, Dr. Scott is also a diplomate of the American Board of Examiners in Professional Psychology. Recently, she was approved for the private practice of psychology by the American Board for Psychological Services.

Dr. Scott's current recreational interests are flower growing and arranging, contract bridge, and social dancing.



CONVENTION OFFICIALS: Assembled in St. Louis on April 2 are, left to right, Arthur A. Hitchcock, executive director, APGA; Winifred S. Scott, NVGA secretary; C. Winfield Scott, NVGA trustee; Mrs. Polmantier; Paul C. Polmantier, NVGA trustee; Mrs. Fletcher; Frank M. Fletcher, Jr., APGA past president; Mrs. Roeber; Edward C. Roeber, NVGA president.

NVGA: Salutes:

The Akron Area Vocational Guidance Association

THE Akron Area Vocational Guidance Association, winner of the first NVGA Group Achievement Award, is one of the "promotingest" and "producingest" branches in NVGA history, as the following highlights indicate:

- In the early 1950's, the first edition of *People Who Know in the Akron Area*, a directory of lay counselors, discussion leaders, and speakers on career fields was published. The fourth revision of this publication is now ready for printing and distribution to school and agency counselors in the area. This project was developed in cooperation with the Kiwanis Clubs of the area and the printing department of Hower Vocational High School.
- A major project was launched in 1957 with the publication of *Akron Area Careers*, a loose-leaf binder containing occupational data covering the major job fields of the area. New monographs are added to the binder as they are developed. This project was developed in cooperation with the Business-Community Relations Department of the Akron Chamber of Commerce, the Board of Education, and about twenty area industries.
- Most recent publication is the 1958 *Directory of Scholarships and Financial Aids*, a loose-leaf directory underwritten by the West Akron Kiwanis Club.
- During the last eight years the branch, either as an organization or through the initiative of individual members, has stimulated conferences, in-service training programs, and community programs related to vocational choice and training.

So well have the activities of AAVGA been accepted in the community that plans are currently under way to employ an Executive Secretary to coordinate continuing activities under the joint sponsorship of the United Community Fund, the PTA, local industries, and other interested groups.

Good luck, Akron! May other NVGA branches catch your spirit!

-JOHN G. ODGERS, Ohio State Supervisor of
Guidance Services



Left to right, C. Gilbert Wrenn, NVGA luncheon speaker; Mrs. Wrenn; Raymond N. Hatch, NVGA past president; Mrs. Hatch; John G. Odgers, trustee; Margaret E. Andrews, NVGA past secretary; Walter F. Johnson, APGA president; Margaret E. Bennett, NVGA trustee; Clarence W. Faylor, retiring NVGA trustee; Blanche B. Paulson, NVGA past president; and Delmont K. Byrn, editor, Vocational Guidance Quarterly.

First NVGA Achievement Award Winners



Receiving the first NVGA Achievement Awards presented at the 1958 Convention, left to right, are: Arthur J. Jones, professor emeritus, University of Pennsylvania; Mabel Riedinger, for the Akron Area Vocational Guidance Association; and Forrest H. Kirkpatrick for Harry D. Kitson, professor emeritus, Columbia University, who was unable to be present.

Building Campaign Moves On

THE APGA Building Fund Campaign now will accept Life Subscriber payments of \$200 according to four plans: \$75, \$75, \$50 payable over a three-year period, \$20 down and \$15 quarterly

or \$10 bi-monthly for three years, \$10 per month, and one lump sum. If 1958-59 APGA dues are already paid \$10 will be credited toward a Life Subscription.

PUTTING STATISTICS TO USE

The Expectancy Table—A Predictive Validity Technique

by HENRY R. KACZKOWSKI and CARL SCHUESSLER

THOUGH MANY high school freshmen are aided in the selection of a course of study by means of standardized tests, few of these procedures are validated because counselors believe that they entail complicated statistical procedures.

For the most part the coefficient of correlation is used in validation studies. Current statistical literature contains a number of procedures that will shorten the time needed to compute a correlation coefficient. These methods give only approximate results, however, they are still usable for they supplement the counselor's personal judgment of the test results.

Flanagan [2] suggests that short cuts in the calculation of the coefficient of correlation are fourfold: (a) cut the number of operations that have to be performed; (b) substitute simple numbers for larger ones; (c) simplify operations where possible by looking up a value in a table; (d) cut the number of times each operation is performed. Described below is a study which used the procedures suggested by Flanagan.

The purpose of the study was to see if the space and reasoning scores of the Primary Mental Abilities test obtained in eighth grade could be used to forecast success in high school freshman machine shop.

HENRY R. KACZKOWSKI is Assistant Professor of Secondary Education at the University of Wisconsin—Milwaukee; CARL SCHUESSLER is a Machine Shop Teacher at Harrison Technical High School in Chicago.

Various studies [3, 6] have pointed out the advantage of using these two kinds of scores. The subjects were 81 freshmen machine shop students in attendance in a Chicago technical high school.

In order to measure mechanical ability as objectively as possible, mechanical ability scores were obtained from the quality of workmanship displayed on a particular machine shop project (a C-clamp). Three qualified machine shop teachers individually evaluated each project, using the same criteria as a basis for judgment. Shop grades were not used because it was felt that these grades could not be considered reliable measures of mechanical ability since many factors influence them.

The C-clamp project was chosen in the light of mechanical ability aspect of the work involved. Power driven machinery was kept to a minimum in order to rule out the accuracy of the machine from influencing the quality of work. With the exception of the drill press, all tools were hand operated.

Four Correlation Methods

After the completion of the project and its evaluation, the next step was to compute the coefficient of correlation between the shop project and the space and reasoning scores of the Primary Mental Abilities test. As Flanagan has suggested, there are many ways of doing this task. Reported below are the coefficient correlations with the methods of computation ranked in

TABLE 1

Correlation Between Space and Reasoning Scores of the PMA and Mechanical Ability in Machine Shop

<i>Method of Computation</i>	<i>Mechanical Ability— Space Correlation</i>	<i>Mechanical Ability— Reasoning Correlation</i>
Table value-tetrachoric <i>r</i> (Jenkins)	.28	.35
Tetrachoric <i>r</i> (Tate)	.28	.36
Scatter diagram	.30	.33
Product-moment correlation	.31	.34

increasing order of time needed to do the work.

From the above correlations the counselor could conclude that space and reasoning scores would not adequately predict mechanical ability in machine shop. Since this is the only data available, how can the counselor make judicious use of it?

The Expectancy Table

It should be remembered that a coefficient of correlation is to a degree meaningless when we deal with individuals, for it is used to compare groups. The expectancy table [7, 8] could be used to compare individual performance with that of a group.

In developing an expectancy table it is possible to arrange the data so that it will yield a correla-

tion coefficient. Either the scatter diagram method or the tetrachoric *r* method of Tate could be used. An article by Bittner and Wilder [1] shows how an expectancy table can be used in conjunction with a correlation coefficient. The power of this approach is demonstrated below. In addition, McCabe [5] has established a table which enhances the interpretation of individual percentile or standard scores when the validity or reliability coefficients are known.

From tables 2 and 3 it can be seen that the procedure outlined by Bittner and Wilder is superior to the usual method of constructing an expectancy table because the relationship between the two variables is considered. This makes it possible to forecast the odds for

TABLE 2
Expectancy Table

<i>PMA Reasoning</i>		<i>Mechanical Ability Score</i>	<i>PMA Reasoning</i>	
<i>Number below Median</i>	<i>Number above Median</i>		<i>Per Cent below Median</i>	<i>Per Cent above Median</i>
34	26	14-19	41.9	32.1
7	14	9-13	8.6	17.3

TABLE 3
Per Cent Expected to Exceed the Median Mechanical Ability Score

Score on PMA Reasoning Test	Per Cent above the Median	Per Cent below the Median
9	26	75
12	42	59
15	61	42
17	72	29
21	88	13

making any score or attainment from a given set of data if the relationship between the two attributes is known.

Using the Data

It should be pointed out that in this procedure a counselor does not have positive assurance that a given student will pass or fail a given course. The odds for success in a given area supplement the counselors personal judgment.

The student may either lean on the odds or use them as guides for action. He may adopt the attitude, "The odds are 4 to 1 that I'll pass the course. This means I don't have to work in class." On the other hand he may feel, "Since the odds are 4 to 1 that I'll pass, if I work at my usual pace, I may be able to go out for the school newspaper without jeopardizing my class work."

Which attitude is taken by a student depends on how the coun-

selor imparted the information to him.

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First-time enrollments in college may reach 1.2 million in 1965—an increase of about 60% over 1957.

* * *

Work—Something that when we have it, we wish we didn't; when we don't, we wish we did; and the object of which is to be able to afford not to do any someday.

—Changing Times

Flying Squadrons

in a Children's Hospital

by LOIS M. JOHNSTON and ROBERT M. PORTER

THE summer replacement situation in hospitals need not be just an annual three-month headache. It has all kinds of wholesome possibilities.

It is essential, however, to treat summer workers not merely as summer workers.

The Children's Hospital of Columbus developed two "flying squadrons" which helped eliminate the normal summer let-down of efficiency and became a continuing foundation for a long-range recruitment program. In scope it filled in a large and important area, between the aide and the professional levels.

Versatile Applicants Chosen

Briefly, this is what happened:

From the normal flow of summer job applicants, a dozen of the most promising young men and women were selected. The extent of their promise, particularly in the hospital field, was determined through American Psychological Corporation placement interviews. Important considerations were intelligence, industry, aptness, and character, but also versatility and adaptability. They had to be able to shift quickly in application of their skills—from routine filing to making up babies' formulas, helping interview patients being admitted, or helping X-ray technicians. For this

versatility the hospital was willing to pay five per cent over normal vacation wage scales.

Significantly, only one of the 12 "washed out."

The group was given a one-week intensive training course in all phases of hospital operation. They were taught to operate a variety of equipment and machinery. They conferred with staff supervisors throughout the hospital to learn at first hand the requirements of each department where they might serve on little notice at any time.

Two Squadrons Established

On the basis of information gathered in placement interviews and the training course, the group was divided into two pools—technical and service. The technical pool of six became laboratory, X-ray, and surgical room assistants; social service, out-patient, and physical medicine receptionists and aides; and administrative, stores, and purchasing department clerks.

The service pool of five became laundry, housekeeping, dietary, and central supplies helpers, with broad responsibility in general sanitation, special food and formula preparation and distribution, and handling and distribution of linens and uniforms.

The eleven, nine girls and two boys, met weekly with supervisors for standardized progress reports. This not only kept the group informed on individual accomplishments through comment of supervisors and through self-analysis but

LOIS M. JOHNSTON is Personnel Director and ROBERT M. PORTER is Administrator at The Children's Hospital, Columbus, Ohio.

provided the hospital staff itself with valuable information on the program. Weak spots were pointed up for subsequent strengthening.

At the end of the summer, reports on each trainee were sent to the high school or college vocational counselor of each student. This gave the counselors tangible information for future discussions with the young people involved and, simultaneously, the counselors learned of the opportunities offered at The Children's Hospital for use in describing the work to others in their schools.

Results Are Encouraging

What were the results?

First of all, the overall working efficiency in this area was maintained at a time when everything usually is expected to slow down—except the work load.

Second, eleven young people were exposed, in a serious, directed way, to the possibilities of a life in this branch of public health service. As a result, some are likely to make their careers in hospital work because of this unusual opportunity to see the job to be done—the challenge of helping relieve suffering, particularly in children. They have found out at first hand that there are never enough hands to do all that must be done in a hospital.

Most are young enough to go in any direction vocationally or educationally. They saw the need for further professional training for much of the work, and there is a good possibility that some may head into an area of critical shortage like nursing. There is still plenty of time for specialized education for most students.

Third, there was demonstrated real public relations value, two-phased. Columbus newspapers gave the development feature treat-

ment. The word is being passed around for high school and college students to remember for next summer. And flying squadron members themselves spread the word voluntarily. When asked, "What are you doing this summer?" they did not have to reply, "Cutting grass."

Approach Is Sound

What made the program work?

The whole plan was inherently sound. It took advantage of the natural curiosity and enthusiasm of young people by presenting them with interesting, and at times fascinating, assignments. No one could "get in a rut." Responsibilities went along with each task. Whatever *anyone* did helped patients and staff in measurable ways.

Second, it interested the staff. Physicians, busy as they always were, found time to comment on the progress of the whole group or of individuals. It was not merely a novelty; it was definite help, a service to them—the service they frequently did without during the vacation period.

Third, it had complete administration support. It was not treated with an air of "maybe it will work, maybe it won't," but as a logical procedure which should have been thought of years ago.

Finally, it was administered according to need rather than predetermined formula. A six-member staff committee, each member representing a different area of hospital service, kept the program flexible so that each of the two pools could be thrown into a single task or distributed among several, as required, from day to day or even hour to hour. Within the physical limitations of the eleven young people, somebody was always available to do what needed to be done.

Another Outlet for the Math-Minded:

THE ACTUARY —A BUSINESS SCIENTIST



by **LOWELL M. DORN**

THERE probably is not a man, woman, or child among the 173 million people in this country who has not come under the scrutiny of an actuary, if only as a unit in a set of statistical data. Yet few of them know what an actuary is, what his work entails, or the opportunities that exist for qualified persons in the actuarial field.

The actuary himself sometimes finds it difficult to describe his job adequately for it is one that covers a wide variety of interests. Basically, however, he is a business executive and mathematician who deals with both the technical and practical problems of the life insurance field. To do this he must have executive qualities and be thoroughly trained in the specialized mathematics and principles of life insurance. But he also must have a good knowledge of the fundamentals of several other normally specialized professions.

In order to properly assess the effects of medical impairments, for example, he must be part doctor. To prepare proper policy forms he must be part lawyer; to forecast future interest rates, part financier; to calculate annual statement data, part accountant. His dealings

with policy owners call for public relations knowledge, and to develop new kinds of policies to meet modern needs he must have some flair for merchandising.

He is an executive who has broad administrative and technical responsibilities. To meet both of these requires a balanced combination of the theoretical with the practical.

Actuarial Opportunities

An actuarial career can be rewarding. It offers an opportunity to combine scientific, professional, and business skills in a field which serves a great social need.

The pay is high even at the outset, and it is possible to earn a good salary while pursuing the necessary advanced studies "on the job," thus avoiding the financial strain of post-graduate training necessary in many other professions. Advancement is rapid, depending on ability and achievement, and it is possible for a comparatively young man or woman to reach an executive level within a few years after his employment. Opportunities exist even beyond the actuarial field; not infrequently do actuaries become the chief executive officers of their companies.

While life insurance and casualty insurance companies employ most of the qualified actuaries, there are a number of positions available in

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other areas. The Federal government requires actuarially trained people to work on population statistics and various welfare programs. State insurance departments, consulting actuarial firms, colleges and universities, pension planners, and various industries also need the skills of an actuary.

It is expected that the demand will increase more rapidly than the supply. At present there are in the United States and Canada only about 1,700 members of the Society of Actuaries and about 350 members of the Casualty Actuarial Society. Many more are needed.

Becoming an Actuary

How does a person become an actuary? First, he must decide whether it is the career he wants. If he has mathematical aptitude, leadership potential, ability to present his ideas clearly, and a desire to use his "book-learning" in solving practical business problems, he probably has the fundamental qualifications. He may major in mathematics, although a major in economics, accounting, or business

administration, with supplementary math courses, would also be good preparation.

Even while the prospective actuary is still in college, he may take the preliminary examinations of one of the professional actuarial societies. These are tests of language aptitude and mathematical ability. It is most advantageous for the student to dispose of the early exams while in college since it usually means a higher starting salary and materially shortens the period of study after college.

Subsequent examinations cover the more technical problems of insurance and related fields and are usually taken after the student's graduation, while he is employed as an actuarial trainee.

The standards of admission to the professional bodies are high, and intensive study is required to qualify as a Fellow of either Society. But there are few careers that hold more promise for persons with the right combination of executive potential and mathematical aptitude—the practical and the theoretical.

• • • Employment Outlook for Physicists • • •

Physicists qualified to do basic research or fairly advanced applied research and development have been and will probably continue to be in particular demand. Research organizations, whether those of government, universities, or industry, have had considerable difficulty in satisfying their requirements for physicists, and these demands are expected to continue to increase.

The employment situation for physicists in college teaching has been excellent in the past few years for qualified persons, and the demand will become greater during the next decade, owing to the expected rise in college enrollments. A shortage of persons well qualified to teach physics at the graduate level will be one of the chief obstacles in any attempt to increase the supply of physicists.

—1957 *Occupational Outlook Handbook*

Any American boy has a chance to become President, but he also runs the risk of being appointed Secretary of State.

HAROLD COFFIN

Science and Mathematics



from the U. S. OFFICE OF EDUCATION*

THE MOST recent nationwide survey of pupils studying science and mathematics in American public high schools showed that in the fall of 1956 there were:

- 4,592,000 children age 16 and 17 in the United States
- 2,776,000 enrolled in the 11th and 12th grades of a public high school
- 830,000 studying science
- 659,000 studying mathematics.

This survey—made by the U. S. Office of Education—indicates that at some point:

- 1 out of 3 high school students take chemistry
- 1 out of 4 physics
- 1 out of 3 intermediate algebra
- 1 out of 8 trigonometry or solid geometry.

Some pupils cannot study these subjects even if they want to. The survey indicated that about 100,000 seniors were in public high school where no advanced mathematics of any kind is offered. About 61,000 were in schools that offered neither chemistry nor physics.

There are many reasons why basic science and mathematics courses are not taken by a larger percentage of pupils—too little emphasis on these subjects in relation to other courses, shortages of qualified teachers, lack of up-to-date teaching facilities, insufficient guidance, and other factors.

In 1956 only 8 State Departments of Education had special supervisors or directors to help local school systems foster and improve the teaching of science and mathematics. At the same time, 48 States had special programs to promote the teaching of home economics, agriculture, and distributive trades, and 27 States had such programs in physical education.

* Excerpts from *Education Fact Sheet* #5, U. S. Department of Health, Education, and Welfare, February 3, 1958.

Fourteen States last year did not require as much as a single course in either science or mathematics for high school graduation.

Many U. S. high schools require only five hours of science a week for one year. By contrast, in the USSR all secondary school students must study science 7 hours a week during each of the last four years. The Soviet requirement is 5 to 6 times as great.

Many U. S. high schools require only 5 hours of mathematics study a week for one year. By contrast, in the USSR all secondary school students must study mathematics for 1 hour a day, six days a week, during their last 4 years. The Soviet requirement is about 5 times as great.

Of the men and women prepared to teach science and mathematics, only about 6 out of 10 go directly into teaching. Jobs in private industry pay more and offer greater incentives.

• • • Outlook in the Atomic Energy Field • • •

Atomic energy is a new field which promises long-range growth in employment. Additional nuclear fuel processing activities will probably result in increasing employment in uranium milling, refining, and processing operations. Employment is also expected to grow in both reactor manufacturing plants and powerplants which operate and maintain nuclear reactors. In addition, employment expansion is anticipated in laboratories which process radioisotopes and in plants which make control equipment and radiation recording and detection instruments.

—1957 Occupational Outlook Handbook

• • • Employment Outlook for Chemists • • •

Along with the anticipated growth in demand for chemists, a steady increase in the number of chemistry graduates is expected. Assuming that the proportion of college graduates majoring in chemistry and biochemistry remains the same as in recent years, it appears that the number of new graduates available for work in the field could be twice as great in 1965 as in 1955.

Thus, there may be increased competition for the better paying professional entry positions in chemistry. However, the rising demand for chemistry graduates with ability and thorough training should continue to provide favorable opportunities for employment and advancement for such graduates for many years to come.

—1957 Occupational Outlook Handbook

• • •

Employment in manufacturing, mining, transportation, and, to a lesser extent, construction, tend to fluctuate most widely in periods of recession. Service, finance, government, and to some extent, trade are more stable.

• • • Employment Outlook in the Social Sciences • • •

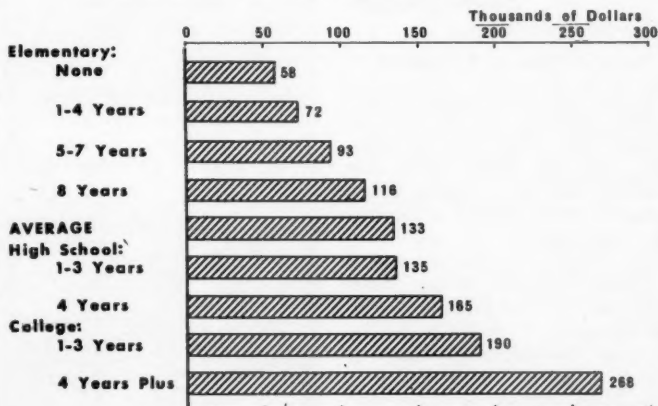
Employment in the social sciences is expected to increase moderately during the remainder of the 1950 decade and more substantially during the 1960's, largely because of the anticipated increase in need for teachers in colleges and universities. Some increase in employment of social scientists is also expected in both government and industry, as a result of the growing reliance on social science methods in solving the economic and social problems of industry and the Nation. In addition to personnel required for new positions, many social scientists will be needed each year to replace those who retire, die, or leave for other employment.

Employment opportunities for new Ph.D.'s were good in 1956 and will probably continue to be favorable in most social science fields at least through the early 1960's. New graduates with master's degrees may meet considerable competition for professional positions in some social science fields. College graduates with only bachelor's degrees in social sciences are likely to have limited opportunities for professional employment in these sciences, but many will find work in related fields of business or public administration, social work, and high school teaching.

—1957 *Occupational Outlook Handbook*

Chart 4.

Estimated "Lifetime" Income (in 1949 Dollars) of Men With Different Amounts of Education



Source: Derived from Glick, Paul C., and Miller, Herman B. Educational Level and Potential Income. *American Sociological Review*, Vol. 21, No. 3, June 1956. (Based on 1950 Census data.)

FROM FEBRUARY 1958 THE OCCUPATIONAL OUTLOOK

Follow-Up Facts and Figures While They're Hot

by JACOB A. NOLFO

THE DESTINY of follow-up study findings need not be to gather dust. They can be brought to the attention of the right people through a display like the one at Haldane Central School. But first a little background.

When it came to accounting for the schools graduates, faculty members at Haldane Central were just plain talking through their hats. Then the guidance staff set out to find out about first jobs obtained by graduates of the past five years.

They called parents, met the graduates in town, and called friends who could give reliable information. As a result they were able to list the places of business, their locations, and the graduates who were hired there.

Results Publicly Displayed

This survey was conducted at the Haldane Central School in Cold Spring, New York in November, 1957, and the results were first publicized through a display in the guidance office during American Education Week.

The display consisted of a listing of companies and firms, under which the names of Haldane graduates appeared; a center poster interpreted the display; a map of New York State with colored pins showed the location of plants that

hired local graduates. A poster showed the percentage of graduates hired in town and the percentage of these people hired within a 25-mile radius of the town.

The display was personalized by adding a notice and a sheet of paper for comments, asking viewers of the display to make corrections or additions to the list of first jobs. Quite a few people contributed corrections.

After completion of the project, the school staff was more aware of the many opportunities for work available in the small town.

Before the survey, the writer was under the impression that the local boys and girls found it difficult to obtain jobs in the home community. The survey proved how wrong this idea was.

Out of 140 graduates (five-year period), 42 obtained "first jobs" in the home town and 98 obtained "first jobs" within a 25 mile radius of the town. To other Haldane



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staff members, too, this was startling; it has since caused them to be more careful about predicting where local graduates will find work.

Students Should Help

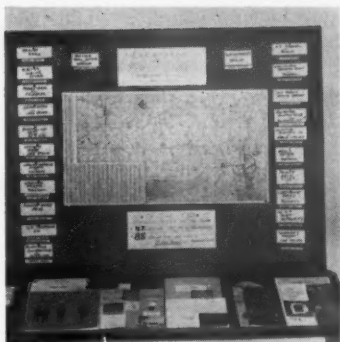
Students were included in the projects only as a source of information on where their sisters, brothers, relatives, or friends obtained their first jobs. This was a mistake; they could have done much more.

This survey would be "a natural" for a high school course in Occupations, as the class could



find out firsthand where most grads of their school obtained first jobs. They also could discover for themselves the range of occupations covered within their own town. Knowing where first jobs were obtained, they could plan their own beginning job prospects with more confidence.

Such a student-made study could point up to the townspeople, through publication in the local newspaper, the possibilities existing within their own community which many have not sensed before. The survey report could



show where the greatest number of graduates are hired as to location; where the greatest and least amount of turnover is in the community. This last point would require another survey to check on the jobs held by the grads a few months to a few years after the graduation.

The armed forces and the IBM plant in Poughkeepsie were the two locations where more of the grads found first jobs. The armed forces was placed on the list of employers since all of the people listed under that title volunteered, plus the fact that most of the boys who volunteered within the five-year period were still in the service. Some are making a career of the service; most have not finished their four-year hitch.

Display Is Effective

The most time-consuming part of the project was the checking and rechecking on each student to make sure the information was correct. The actual making of the display showing the results was easy after the information was completed.

If the printing and other information on the display had been condensed and placed on a port-

able bulletin board, it could have been used for illustrated talks to the businessmen's groups in the town. These groups undoubtedly

would be deeply interested in results of surveys such as this. After all, it's their community, their children, and their employees.

The

OLD COUNSELOSOPHER

says:



Although not likely, maybe the guy wearing the black leather motorcycle jacket is doing so to keep warm.

• • •

Expecting a child to "follow in his father's footsteps" gives him at least a 25-year handicap on other children.

• • •

In all things, 50% of the population will be less successful than the average.

• • •

The child's own perception of his experiences and present status (no matter how inaccurate) determines his behavior more than does a counselor's appraisal (no matter how accurate).

• • •

The counselor should be prepared to handle *actual inferiority* as capably as he handles *inferiority complexes*.

• • •

It is much easier to close educational or vocational doors than it is to open new, more appropriate ones.

• • •

Even without any formal training in counseling, some teachers give young people with problems a sympathetic hearing; this is the main thing that counselors *with* training do.

• • •

Counseling before a crisis, instead of after failure, is more economical for all concerned.

• • •

Sometimes all the counselor can do is soften the blow of impending failure.

• • •

The standards (their own) by which most adults judge student behavior are at least 25 years (one generation) behind times.

* * *

We have more critics of youth than we have examples for youth.

* * *

For every counselor who listens too much during student interviews, there probably are 10 who talk too much.

* * *

Counseling techniques will never disguise the counselor's own personal quirks.

* * *

Coming up with the right answers to problems is only part of the story. Living involves adjustment both to problems and to the having of problems.

* * *

Adolescents, as a group, adhere to their adolescent code of behavior at least as well as adults, as a group, adhere to their code of behavior.

* * *

Parents, teachers, and counselors are really successful when they become no longer needed.



New Books On Vocational Guidance

by DELMONT K. BYRN

Guidance Services in Schools, by Clifford P. Froehlich. New York: McGraw-Hill Book Company, Inc., 1958. 383 pp. \$5.75.

This second edition of *Guidance Services in Smaller Schools* is an introductory text giving an overview of guidance services in both elementary and secondary schools. Services to pupils in groups, to pupils as individuals, to the instructional staff, and to administration are described. In addition to developing these services, there are chapters on: a point of view, guidance programs in action, organizing a program, initiating a program, teachers roles, the curriculum, public relations, and research and evolution. Frank L. Sievers of the U. S. Office of Education collaborated on the chapter on services in the elementary schools.

Personal Adjustment to Business, by James Gates and Harold Miller. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1958. 488 pp. \$5.95.

Starting with The Importance of Career Placement and carrying through to Going Into Business for Yourself, this book provides information on the geog-

raphy and customs of the business world. It considers career planning, job getting, and moving successfully on the job. It is a bridge into the business world, involving evaluation of oneself *for* and *on* the job and what to anticipate in applying for a job in view of personnel selection methods used by business firms.

Rehabilitation: A Community Challenge, by W. Scott Allan. New York: John Wiley & Sons, Inc., 1958. 247 pp. \$5.75.

The interdisciplinary approach to rehabilitation reviews the concepts, methodology, facilities, and personnel of currently available services. Such topics as sample budgets, staffing patterns, and costs provide information for persons operating or planning rehabilitation centers. Also covered are social laws, health insurance, and medical care plans. An ideal community pattern of planning, action, and support is developed in this 24-chapter book of basic principles and methods.

What Happened to Our High Schools?, by John Francis Latimer. Washington, D. C.: Public Affairs Press, 1958. 196 pp. \$3.25.

The Assistant Dean of Faculties and Professor of Classics of George Washington University, in this statistics-laden book, describes the failure of the American people in their educational responsibilities. This study centers mainly but not exclusively on the high school curriculum, tracing the changes in high school studies and enrollments from 1890 through 1949, with data on foreign languages continued through 1954 and mathematics and science through 1956. In summary, it presents the 1894 proposals of the Committee of Ten in which mathematics, science, foreign languages, history, and English are the principal subjects, as each present-day student's new educational bill of rights.

Trends in Distributive Education, A Report of A National Conference, September 30–October 4, 1957, Washington, D. C. Washington, D. C.: Government Printing Office, 1958. 88 pp.

The national conference of state supervisors and teacher trainers of distributive education, called by the Division of Vocational Education, U. S. Office of Education, considered trends affecting distribution, broadening the scope of distributive education services, how to work with various agencies and organizations, teacher procurement and preparation, and planning state leadership programs. This report gives a digest of the presentations and summaries of the discussions.

Occupations and Values, by Morris Rosenberg with the assistance of Edward A. Suchmann and Rose K. Goldsen. Glencoe, Ill.: The Free Press, 1957. 158 pp. \$4.

Supported by Carnegie Corporation of New York grants, this study examines trends and changes in the values, attitudes, and behavior of a large number of Cornell University students interviewed in 1950 and again in 1952. Included is the intensive investigation of changes of occupational choices, including the degree of specialization, relationship of aspirations to expectations, congruence between occupational values and occupational choices, the individual's socioeconomic ideology, career dedication, personalities, and social pressures.

Occupational Information, by Max F. Baer and Edward C. Roeber. Chicago: Science Research Associates, 1958. 603 pp. \$5.95.

Essentials of the world of work are presented for teachers, counselors, administrators, and counselors and teachers-in-training in this revision of the 1951 volume. Included are an overview of the industrial structure of the nation, data on the labor market from World War II to the present, career choice information, guides for appraising occupational literature, and major sources of information about occupations and professional and special training schools. There are suggestions on units of study on occupations, follow-up surveys, informational libraries, filing plans and displays.

The Administration of Student Personnel Programs in American Colleges and Universities, Series VI Student Personnel Work, No. 19, by Daniel D. Feder (Chairman), Joan Fiss Bishop, Wendell S. Dysinger, and Leona Wise Jones. Washington, D. C.: American Council on Education, 1958. 46 pp. \$1.

This is the last of a series of A.C.E. brochures on personnel work in colleges and universities. It reexamines student personnel programs, services, problems; functions, operations, and evaluation; administration of the program; ends with chapters on criteria for evaluation, and conclusions. Included in the functions described are: admissions, registration and records, counseling, health service, housing and food service, student activities, financial aid, placement, discipline, special clinics, and special services. Criteria of evaluation deal with program and plans; the daily operations, climate of opinion, actual results, staff morale, and the budget.

A Directory of Small Colleges, by Alfred T. Hill. Washington, D. C.: Council for the Advancement of Small Colleges, Inc., 1958. 39 pp. 50¢.

This is a directory of the 64 colleges holding membership in the Council for Advancement of Small Colleges. Located in 31 states, the colleges average about 300 in enrollment, with six having fewer than 100 students, three having more than 1,000. Member colleges consist of 31 Protestant, 16 Catholic, 9 interdenominational, and nine non-church-affiliated. One concentrated paragraph of data is given for each college.

It's Your Life, by James J. Cribbin, Brother Philip Harris, and William J. McMahon. New York: Harcourt, Brace, and Company, 1958. 354 pp. (paper bound \$2.64).

Third in the *Insight Series* to provide guidance for Catholic Youth, this textbook is directed toward teen-age readers. Each of the 30 chapters considers a worrisome topic (Mixing With the Other Half, Your Career as a Christian, Enlistment vs. Induction, Sizing Up Your Occupational Fitness). Tabular material helps cover Yardstick to Catholic Women's Colleges and Yardstick to Catholic Universities and Men's Colleges. Numerous checklists, illustrations, charts, and papal quotations are used. Other volumes of the series are: *It's Your Education*, *It's Your Personality*, *It's Your Vocation*.

A Newspaper JUST FOR GUIDANCE

by MILT F. TOSKY

IT LOOKS like the "Wright" Guidance News, which made its debut in January, 1958, in Wilbur Wright High School, Dayton, Ohio, is here to stay.

It all started back in the September, 1956, issue of the *Ohio Guidance News and Views* with an article relating the story of an Akron minister who wrote his thesis on "A Survey of Guidance Work." He pointed out:

"A great many parents do not know that the schools have a guidance and counseling program, and if they are vaguely aware of it they do not know how it functions or what it can do for their children. . . . The schools through an effective

public relations program should make parents aware of their guidance programs. Where parents do not understand the principles of the school guidance program, or lack information about it, the schools should correct the situation. Unless this is done the program will suffer because of lack of cooperation of the parents. Also, the schools should be aware of what parents think about the guidance program, and their areas of satisfaction and dissatisfaction.

"That unless parents know what the schools offer by way of counseling, the home and the school might get at cross purposes and serve only to confuse the student. . . ."

In approaching the group guidance plan in a different way, the author also wanted to reach the parents. What better way to accomplish both objectives than through a small, attractive newspaper?

MILT F. TOSKY is Counselor at the Wilbur Wright High School in Dayton, Ohio.

Page 6 "WRIGHT" GUIDANCE NEWS Feb. 18, 1958

Military Obligations

At Reserve-Age 17-18½; 6 months active duty; balance in active reserve; total of 8 years; you are draft deferred. You select a particular air force job or field of training. When a draft opening occurs in this area you are notified, given physical, signed up. If you pass aptitude test for your field you serve your six months in basic training and in school. Active reserve time is 2 days per month at Wilbur, not Basic, usually on week-ends; 2 weeks summer training program. You can make up missed drills.

At Reserve-Age 18½-25; 6 months active duty; 4½ years active reserve of 15 days summer camp per year; 1 evening per week drill; 3 years of "Standby service" a total of 8 years. You can make up missed drills.

(You continue to make drills)

Scholarships Available

The National Restaurant Association offers five \$1,000 scholarships each year. Write to Miss Kathryn Buckner, Educational Director, National Restaurant Association, 115 Michigan Ave., Chicago 3, Ill.

Ohio State University offers a large number of agriculture and home economics scholarships. Check companies and associations at Ohio Co., Burr-Ruckel, Union Park & Home, J. B. Watkins, Standard Oil of Ohio, Ohio Restaurant Assn., Farm Bureau, and many many others provide scholarships. Write Miss Ad. Deane, College of Agriculture, Ohio State University, Columbus 10, Ohio.

Your Best Friends Won't

You have often heard, or read the advertisements that feature, "Even his best friends won't tell him." Well, you know they were speaking of R.O. for mouth-ful.

Many of your best friends won't tell you that you are nice or a hero, either. And when your Mom or Dad tells you this, "you immediately go into a mental dream of leaving home and showing them a thing or two." I know what I am talking about—believe it or not, I am young once.

Well, I'm going to contradict these ads—I'm your best friend, and I am telling you to check yourself right now—ARE YOU LAZY?

After you get an A.B. degree you start learning the rest of the alphabet.

A A A

We Can Help You

Are you planning to take College Board Exams in March or May? There are some new aids in the Dean's Office in the form of Report Exams and Answers. These cover English, Spanish, German, Latin, Algebra, Geometry, Trigonometry, World and American History, Biology, Chemistry, Physics and Earth Science. You may borrow these at any time.

A A A

The Winchman!

The only instrument for the best letters of application for a job comes from girls. This means to prove that the weaker are not better competitors! Franklin Carter (F.C.) of H.R. 212, and Pat Wilderhus, H.R. 212, and Sophomore Evelyn Winkler, H.R. 212, wrote these excellent letters, and received their basketball tickets. Thanks girls for entering. P.S.—I didn't go with anyone—I did not want to cause problems.

Now your parents read this paper!

The "Wright" Guidance News WILBUR WRIGHT HIGH SCHOOL

Vol. 1, No. 2 DAYTON, OHIO Feb. 18, 1958

College Costs: How To Meet

A college education is within the reach of children of families with incomes from \$4,000 to \$7,000 a year. Typical range of yearly college expenses is from about \$1,250 at a state university to \$2,575, at a private women's college. National average is about \$1,600.

Most colleges prefer that their male students work—it's educational. On an average each a student makes \$450 annually. Some help you locate summer work, and many students earn as much as \$400 during a summer.

Scholarships average \$250 to \$500 a year. Why not try for them?

Then there's the student loan fund—another aid for you.

A A A

A Wise Man Said . . .

I once asked a successful man what the secret was to success. He said, "You have to have a goal!"

Further: "If you are a normal healthy person of fair appearance and good intellect, good morals, and good habits, you have every quality, and in many cases, much more than many of our industrial giants, aviators, and renowned leaders at the beginning of their careers."

The difference is that these men were not bogged down with mental laziness and physical inertia. It means they were NOT sinking lazily. There is no secret! Simply have worthy objectives; set your heart and mind upon them; roll up your sleeves and GO! TO WORK!

That's what the man said! Amas.

By their are usually small hints who help on choosing.

Build a Catalog Library

If you are thinking about college why not start to build a small library of college catalogs?

Do it early enough—don't defer. Send for catalogs from institutions that you would like to attend.

Find out the entrance requirements, costs, and what is offered in the different fields of study. It will help you in your career plans.

A A A

College Achievement

This may be of interest to those of you who are going to college. A study of college students was made of their achievements, and they were classified as "underachievers" and "achievers."

It was found, among other things, that the Underachievers were characterized by an attitude of hostility toward others, possibly toward authority in general. That this might not necessarily be shown in their outward conduct.

Do you wish this description personally characteristic? Perhaps you will understand.

Any comments or questions on the "Wright" can be sent to Miss Kelly, Counselor, 102

Are You Thinking of an Occupation? Do You Have a Guidance Problem? Our library can help you.

A 16-page booklet is available to you from any teacher in our school. It is a complete listing of all books and pamphlets on guidance and occupational information available in our library.

From the first, *The "Wright" Guidance News* seemed to be having a good effect on the students, but many of the teachers, too, were coordinating the *News* with their school work. Phone calls and notes from the parents indicated their appreciation. Letters from men in business and industry were a gratifying surprise.

The *News* is a free paper, distributed to the entire student body of 1,400 pupils. It is produced at intervals of about three weeks.

In order to keep the costs of publication down a low cost mimeograph paper, $8\frac{1}{2} \times 11$ inches, was used. This size sheet folded produces a four-page $5\frac{1}{2} \times 8\frac{1}{2}$ inch newspaper of some 2,000 words in 10 pt. type. A better type of opaque paper may be used later.

Students help in makeup, printing, folding, and distribution of the *Guidance News*. This cuts production costs, provides work experi-



COMPOSITION: *Two young printers are at work on The Wright Guidance News. One is setting heads, the other is tying up a page after makeup. These students have won All-American honors in typography competition among regular school papers.*

ence, and coordinates the paper with an important school subject.

The reading material is kept on the students' level, with a free and easy manner of presentation. The publication attempts to reach all students: prospective college, and business-industry students, and others. There are messages to all grades.

Coverage includes appeals to better attitudes and study-work habits, views of employers, vocational planning suggestions, scholarship offerings, military obligations, guidance definitions, messages to parents, quotations, and jokes.

Interspersed throughout the paper are small bold lines reading: "Have your parents read this paper?" and "Any comments or questions on the News? Send to the Counselor, 103."

A few suggestions to those who may want to try this type of group guidance newspaper:



PRESSWORK: *In the foreground a student is feeding the platen press in printing the Wright Guidance News. Two students in the background are running a cylinder press in producing the official school newspaper, The Wright Pilot.*

- Print it if you can—if not, do a high quality mimeograph job.
- Keep it small—don't let it get big and unwieldy.
- Be sure to write on the level of the students—don't be stiff and superior.
- Give it the personal touch—let the students laugh a little.

The "Wright" *Guidance News* does not yet have a long history or a large circulation, but already it seems to have a strong, steady influence in the guidance effort of the school. Its public relations appeal to parents and other citizens seems to be making a real contribution to the educational program.

• • •



The Crisis in Education!

by UTTER

Testing,

Guidance and Counseling,

Scholarships

*from the U. S. OFFICE OF EDUCATION**

THOUSANDS of America's best young minds—potential scientists, teachers, and leaders in many fields—are foreclosed from college training each year.

This study was made under a grant from the National Science Foundation to the Educational Testing Service of Princeton, New Jersey. It was based upon returns of a questionnaire from approximately 60,000 high school seniors and juniors in 478 representative high schools in the spring of 1955.

Half of Best Grads Lost

"Higher education is still losing up to one-half of the top 30 per cent or so of the Nation's high school seniors," this report states. "Each year, apparently, between 60,000 and 100,000 highly able secondary school graduates with aptitude and interest for college fail to continue their education for financial reasons. Another group of similar size and ability lack the interest or motivation for college.

"This is a serious waste of intellectual resources which should not be overshadowed by the rising tide of college enrollments," the study concludes.

Scholarships Would Help

A second study, also made in the spring of 1955 by the Educational Testing Service under a grant from the National Science Foundation, concerned the college and career

plans of 10,000 high school seniors in the top 30 per cent of academic aptitude. Of this group of superior students, 80 per cent of the boys and 70 per cent of the girls reported that they would like to go on to college. Of those who *originally* were not interested in continuing their education, four-fifths indicated that they would probably go on to college if they had scholarships.

The report concludes:

"The fact that a very large number of able students without college plans would be willing to go to college if given a scholarship surely indicates that many students do not have college plans simply because they have never been able to view college as being a reasonable prospect. . . . Given a way to pay their expenses, their plans apparently would readily change; given the assurance early in their school career that college is financially attainable, they might include in their courses the science, mathematics, and English needed to make it a reality. . . .

Better Counseling Sought

"In the salvage of cases such as these, a large-scale scholarship program, combined with better counseling in the junior and senior high schools, could most effectively in-

* Excerpts from *Education Fact Sheet #4*, U. S. Department of Health, Education, and Welfare, February 2, 1958.

crease the proportion of able students going to college. The existence of such a scholarship program would make it possible for high school counselors to demonstrate to the 'No Interest' student that college is, in fact, a real possibility."

A nationwide study by the Office of Education covering the period 1950-54 indicated that approximately 325,000 high school graduates during this 4-year period, who were in the top 30 per cent of their classes, did not go on to college. Further, an additional 315,000, also in the top 30 per cent, attended only night or other irregular college classes during the four-year period.

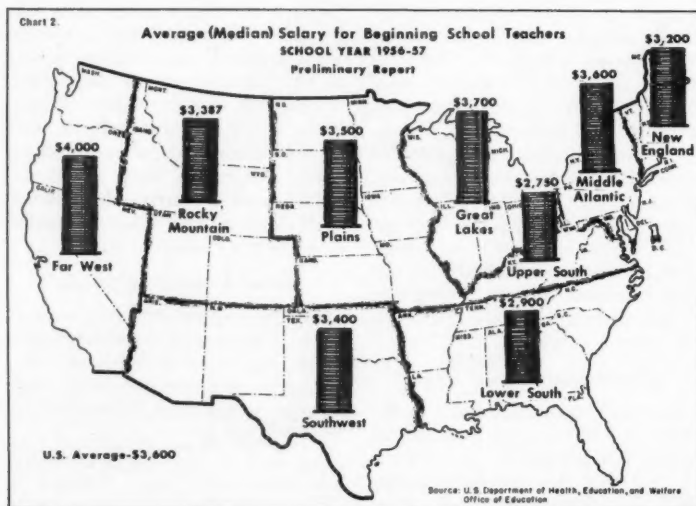
Another study, sponsored by the Commission on Financing Higher Education, was based upon 1951 data of 18-year-olds and high school graduates. These conclusions were drawn: Of approximately 528,000 18-year-olds in the top quarter of ability, 1 out of 5 dropped out of high school before graduation. Of

the 422,000 who did graduate, 219,000, or 52 per cent went on to college. Of the 203,000 superior graduates who did not go on, about three-fourths might have gone to college if they had been offered scholarships.

Financial Aid Needed

"These students," the report states, "will need financial aid in amounts ranging from two hundred to one thousand dollars annually, and we hazard the guess that the average need will be about five hundred dollars."

In addition to superior students who graduate from high school but do not go on to college, a substantial number of talented high school students drop out of high school before graduation. A report of the Commission on Human Resources and Advanced Training shows that every year about 52,500 students in the *top 25 per cent of ability* drop out of high school before graduation.



RESOLUTIONS

passed by the 1958 NVGA Delegate Assembly

1. The membership of the National Guidance Association was saddened by the recent passing of Nancy Wimmer. Mrs. Wimmer had had many important responsibilities in the guidance movement. She was a past president of the Chicago Guidance and Personnel Association, editor of Vocational Guidance News Notes, and was Corporate Secretary and editor for a major guidance publishing concern. The NVGA wishes to express its appreciation for the service and contributions rendered by Mrs. Wimmer in the growth and advancement of guidance throughout the country. We wish to convey to Mr. and Mrs. Harold B. Craswiller an expression of sympathy in the loss of their daughter and our professional associate.

2. During recent weeks the membership of the National Vocational Guidance Association was saddened by the loss of Dr. Shirley Hamrin, one of our highly respected members. Dr. Hamrin was a professor at Northwestern University and a respected author. For years he served this association in an official capacity. His leadership in the vocational guidance movement has been felt throughout the country. The NVGA wishes to convey to Mrs. Hamrin its sympathy and an expression of the high esteem in which he was held by this organization.

3. Be it resolved that the National Vocational Guidance Association inform Secretary Marion B. Folsom of the Department of Health, Education, and Welfare, of our appreciation for the support rendered the guidance movement.

The vocational guidance content of his releases, both to the public and to the committees of the Congress, assist in improving the status of guidance services throughout the country.

4. Be it resolved that the National Vocational Guidance Association commend Secretary of Labor James C. Mitchell for his continued encouragement of vocational guidance activities, and especially to commend the efforts of the U. S. Department of Labor in implementing the Occupational Outlook Service.

Be it further resolved that the National Vocational Guidance Association express appreciation for its representation at the conference on Vocational Training and Education sponsored by the U. S. Department of Labor.

5. *Whereas* the demands of living in modern society brings an increasing need for more effective career choices . . . and

Whereas these choices in a rapidly changing industrial, business, agricultural, and professional world demand an identification of necessary abilities . . . and

Whereas the implementation of these concepts requires trained counselors and expanded counselor preparation programs . . . and

Whereas state department of education services must be included in any expansion of guidance services.

Therefore be it resolved that the National Vocational Guidance Association strongly support federal legislation under consideration which proposes to strengthen and promote guidance programs, and

that the secretary of this organization be instructed to send copies of this resolution to the appropriate committees in the Senate and House of Representatives.

Shortly before the St. Louis Convention the guidance movement in general and NVGA in particular lost one of its pioneer members, Dr. Frank G. Davis. He was Professor

Emeritus of Bucknell University and for many years was active in NVGA and other professional organizations. Always willing to work in behalf of the guidance movement, Frank will be missed at professional meetings and in many other ways. Saddened by his loss, NVGA nevertheless is the stronger for having had Dr. Davis as one of its members.

The Commonwealth of Massachusetts

By His Excellency

FOSTER FURCOLO

Governor

A PROCLAMATION

1958

EVERY citizen in the community has an interest in the problem of manpower conservation and development. Every consumer benefits from the improved quality and lowered cost of goods and services supplied him by producers and purveyors who have taken definite steps to put and keep the right man in the right place.

Every youth, as well as his parents, benefits when our schools, using available guidance methods, help him to eliminate much of the trial and error experienced by past generations in finding and fitting himself for his proper work in life.

Every taxpayer will benefit from the more effective educational program which results from the more general use of the relatively inexpensive guidance program. There is no one who does not have something at stake in the manpower problem.

In view of the fact that in the Commonwealth of Massachusetts in 1908 the first organized plan for Vocational Guidance was developed; that the principles and practices of Vocational Guidance which have been evolved during the ensuing years have been accepted widely throughout the Commonwealth by business and industry, and by public and private schools alike; and in further recognition of the fact that there will be conducted on February 7, 1958 a state-wide Career Guidance Conference for the benefit of Vocational Guidance Counselors.

NOW, therefore, I, FOSTER FURCOLO, Governor of the Commonwealth of Massachusetts, do hereby designate February 7, 1958, as

VOCATIONAL GUIDANCE DAY

and request that the occasion be suitably observed in our institutions of learning and that our citizenry dedicate this day to the aims of Vocational Guidance.



GIVEN at the Executive Chamber in Boston, this twenty-eighth day of January, in the year of our Lord one thousand nine hundred and fifty-eight, and of the Independence of the United States of America, the one hundred and eighty-second.

FOSTER FURCOLO.

By His Excellency the Governor,

EDWARD J. CRONIN,

Secretary of the Commonwealth.

God Save The Commonwealth of Massachusetts

The proclamation (above) of Vocational Guidance Day was issued by Governor Foster Furcolo of the Commonwealth of Massachusetts on the occasion of a state-wide career guidance conference of vocational guidance counselors on February 7.

Briefing

★ ★ ★ ★ ★ the JOURNALS

by CLARENCE W. FAILOR and EMORY JONES WESLEY

ARTHUR L. HARNETT, JR., "Career Information for High Schools," *Journal of Health, Physical Education and Recreation*, 28 (December, 1957), pp. 25-26.

The desperate need for well qualified persons in teaching of health and physical education, particularly for women, has prompted some steps toward recruitment in this area. This article, in a physical education professional magazine, is directed toward having those in the teaching field take advantage of help from various organizations in presenting the career information to young people. Listing of books and pamphlets, films on careers, and addresses of organizations offering help is made, and could well be used by counselors desirous of securing information in this area of health, physical education and recreation.—Martha T. Parkes

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"Whatever Became of Merit Rating," *Personnel*, 34 (January-February, 1958), pp. 8-18.

Merit rating is comparatively rarely used nowadays. It's high time, the writer says, to revive the dying concept. It is dying, he points out, because of the opposition of unions, employees in general, and management in general. He gives some of the reasons why each group has opposed it, including the role of favoritism, the social pressures on those who got the merit raises, and the pressures on the lower echelons of management in the awarding of the raises.

In arguing for revival of merit plans, it is averred that we need to reaffirm our faith in the concept of reward for merit. It is agreed that we need

"good, reliable, objective measures of performance which are readily understood by manager and employee alike," but we should not shrink from assessing personal behavior which affects performance. The financial incentive should be large enough to more than compensate for the unpopularity caused by the achievement of a merit raise.

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LYNN WHITE, JR., "Togetherness and Aloneness," *Childhood Education*, 34 (February, 1958), pp. 251-252.

The survival of the fittest philosophy of the nineteenth century was an exhibition of the extremism of aloneness and a denial of the need of companionship and sharing of experiences. Cooperation was overlooked.

There is just as much of the undesirable in the other extreme—that of too much togetherness. The child must be encouraged to develop his uniqueness in this age of conformity. "Leaps of the informed imagination" are the basis of progress. Inherited ideas do not always fit new situations. "Basic originality seems usually to be achieved by the 'maladjusted,' the ungroupy, the people who treasure otherness and discontinuity."

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KATHERINE POST, "Terminal Training for High School Business Students," *Balance Sheet* 39 (February, 1958), pp. 248-251.

This is the story of the adaptation of the last part of business training in Sussex, New York, High School to the needs of the students to fit them for local employment. It is one of co-

operation of business people, business department of the school, guidance personnel, and other school staff members.

It involves on-the-job training preceded by specific training in the school and followed by an analysis of weaknesses and indicated remedial action.

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MARY S. RESH, "les girls' A New Chapter in the Manpower Story," *School Life* 40 (February, 1958), pp. 8-9.

The number of women workers is on the increase, a step-up to 26.3 millions by 1965 from the present 20.9 millions being predicted. Nearly a third of our present labor force is feminine. One of every three over 14 of our women work outside the home. Three in five working women are married.

The greatest increase is expected in the over-45 age group. Training programs for the 5.4 millions who will be added to our work force in the next seven years are needed. This is a great challenge to vocational educators and others responsible for manpower (and womanpower) control. Women will be used in many newly expanded areas such as dental assistants, dietary assistants, institutional housekeepers, chemical technicians, electrical technicians, etc., etc.

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LOUIS E. HARPER and BENJAMIN WRIGHT, "Dealing with Emotional Problems in the Classroom," *The Elementary School Journal*, 58 (February, 1958), pp. 316-325.

Here is a report based on experiences in the University of Chicago Orthogenic School. Its emphasis is on the theme that the disturbed child is a fearful child; that his reactions are based on certain fears. The teacher who would successfully work with emotionally handicapped children must have an understanding of these fears which include fear of teacher,

fear of classroom, fear of finding out, and fear of achievement.

"Certain experiences are crucial in enabling the disturbed child to remain in school and to learn. Though all these experiences are essential, they vary in priority. The child needs them in the following sequence: safety, basic comfort, pleasures of his own, self-respect, success, and challenge."

These needs can be practically applied in terms of the abilities of the teacher and the child. "The child must be accepted for himself, and for the behavior patterns he has worked out."

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"From the Colleges," *Changing Times*, 12 (January, 1958), pp. 43-45.

Here are brief but pertinent comments on: satellites, scientists and their relation to bright students; non-college going intelligent youths and efforts being made to get them into college; entrance restrictions, particularly at state universities; scholarships; company recruiters at colleges; early college entrance by bright students; income of engineers; how to pick a good college.

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JOHN W. GARDNER, "How to Choose a College, If Any," *Harper's Magazine*, 216, (February, 1958), pp. 49-54.

Mr. Gardner, president of Carnegie Corporation, makes some practical suggestions to students and parents grappling with the problem of college selection. He deals realistically with the factors which should determine whether or not the child should even go to college, and then with the selection problems, making appropriate suggestions for consideration.

He points out that the decisions should rest with the child, not the parents, and that sometimes it is best to wait awhile after high school before deciding whether to go, and if so, where.

He condemns the overemphasis "on college education as a guarantor of economic success, social acceptability, and general human worth," and the idea some parents have that their child must go to a specific institution which they (though perhaps not the child) regard as reputable.

As colleges differ so in size, course offerings, cost, emphases, etc., it behooves us to consider decisions in terms of the needs of each individual "young person and the kind of environment that can best provide him with opportunities for growth."

In terms of career planning, we tend to overemphasize the need for early decisions, for these can, indeed, be devastating for some individuals. Why not instead guide youngsters toward broad development so that "when they become mature enough to decide they can choose among many significant possibilities?" "To put a first-class mind into a vocational or specialist course before he has had ample opportunity to explore the basic fields of knowledge is an unnecessary down-grading of human talent."—Martha T. Parkes

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DANIEL M. GOODACRE III, "Pitfalls in the Use of Psychological Tests" *Personnel*, Vol. 34, No. 5 (March-April, 1958), pp. 41-45.

Psychological testing in industry for the purpose of employee selection has become a fad, but unfortunately a number of concerns are being "taken for a ride" by test salesmen or test literature because they are unable to evaluate a test before purchase. Too many personnel managers, caught up in the testing tide, are swayed by the impressive high correlations of reliability and/or validity claimed for a given test without knowing the meaning of the statistics used and whether the norms or frame of reference would have application to their own situation. "The [test] manual should either indicate the specific correlation between the test scores and job performance measures or state that there is no such known relationship."

Tests can be validated for a company by the employment services in most states by people equipped to conduct such studies *at no cost to the employer*.

Research has shown that it is easier to develop valid psychological tests for skilled workers than for supervisory or managerial people. Present research being done in the promising area of "situational testing" may achieve results for selection of sales, supervisory, and managerial personnel. It merits watching.—Martha T. Parkes

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MARVIN D. DUNNETTE, "Vocational Interest Difference among Engineers Employed in Different Functions," *Journal of Applied Psychology*, 41, (October, 1957), pp. 273-278.

This article describes first steps taken in an effort to develop special keys on the strong Vocational Interest Blank which may be used as aids in more appropriately guiding engineering students through engineering education, as well as in the placement of engineering and other scientific applicants in industry. Because of present demands for scientific and technically trained manpower, this problem is particularly acute. Persons with scientific training are performing a wide variety of functions ranging from routine analysis and testing to top-flight executive jobs. Placement achieved by trial and error methods or other personnel techniques of questionable validity results in a serious waste of manpower.

On the basis of job analysis 238 technically trained people employed by the Minnesota Mining and Manufacturing Company were divided into four groups, comprising pure research scientists, developmental engineers, production engineers, and sales engineers. Four scoring keys were developed by assigning weights to the 44 occupational scale scores of the SVIB which tended to maximize the differences among the engineering functions.

According to Dunnette, "It has been possible by examining the interest profiles of persons performing different technical and engineering functions to develop special scoring keys which accurately discriminate among persons in these four major functions. Interest measurement may, therefore, prove to be a powerful tool in more appropriately guiding students who are undertaking technical training . . . or in more appropriately placing engineering applicants on jobs in which they are most productive and satisfied."—Rolland Ball

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CLYDE L. REED, "Detroit Pioneers in Economic Education," *Social Education*, 2 (February, 1958), pp. 63-65.

This is an interesting report of an experiment in Detroit. To quote the author, "Back in 1951, educators and businessmen in Detroit began an attack upon the economic illiteracy with the creation of the Institute for Economic Education."

Although the reader gets the feeling that this program is rooted in a desire inculcate a respect for the status quo in our economy, the program being followed seems to have aroused interest on the part of other communities. The very fact that a community as large as Detroit endeavors to institute a broad scale usage of community resources in education is newsworthy.

The author lists audio-visual aids and written materials that have been produced specifically for use in this program. These materials are for use from the elementary level on through high school. He also describes an in-service training program that is a part of this experiment.

An interesting sequel to this article might be in the form of a report attempting to show what effect this program is having on students in the area of a clearer understanding of the social ramifications of our economy.—Paul E. Lappala

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ALVIN L. SCHORR, "Families on Wheels," *Harper's Magazine*, 216, (January, 1958), pp. 71-78.

"The total number of 'trailer families' in America today has been estimated at upwards of one million—two out of every three families where the husband is a construction worker or overseer." What causes them to move? What effect does moving have on their homelife? On their income level? Are they a burden on the communities they go to? These and many other questions are discussed in an informative fashion.

Social work agencies find that their problems with trailer-transients are no different basically than with others. A judge in a juvenile court is quoted as stating that "—it's not the trailer children but our own who are giving the trouble."

Reasons for moving cited are: high hourly pay; quick advancement in jobs; lack of strings to freedom of moving; to avoid boredom; escape from various problems through constant adjustment to new situation; desire to see new places develop; and numerous others.

There seems to be close family life among trailer families. The loss of the feeling of "home town" is a growing factor in American life. Mobile families identify quickly with each new community. This mobility is having an important impact on politics, national organizations, welfare work, education, etc.

Of import to the guidance field is the statement, "Not every American family moves regularly, frequently, or at all, but every family lives in an atmosphere in which movement is normal and possible."—Paul E. Lappala

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CHARLES B. SEIB and ALAN L. OTTON, "The Case of the Furious Children," *Harper's Magazine*, (January, 1958), pp. 56-61.

"At the National Institutes of Health Center in Bethesda, six boys with

records of juvenile violence are serving as subjects for one of the most exhaustive studies of human behavior ever attempted."

Out of this monumental study being directed by Dr. Fritz Redl it is hoped will come new information that will be an aid in understanding normal children, preventing disturbances, and correcting those who have already become disturbed emotionally. Under very carefully controlled circumstances financed at an unofficially estimated amount of \$250,000 this project attempts to find out just what happens in the development of a child to cause him to become an "acting out" child. Techniques of dealing with these children have been evolved. Counseling is described. The life-space interview, which occurs at the moment when the child has the difficulty is illustrated in an anonymous case study.

Questions, Dr. Redl hopes the study will help answer, are: (1) How much aggressiveness does a child need today? (2) Can arts and crafts substitute for acting out "for real?" (3) What happens to adults who help aggressive children to adjust? (4) What is the nature of group excitement, the sort of thing that can be seen at a birthday party—but is exaggerated in children with problems? Many other questions are asked. The results of this study should be interesting.—Paul E. Lappala

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WALTER LEIBRECHT, "The Challenge of Juvenile Delinquency: A Sickness in Society," *Phi Delta Kappan*, 39 (January, 1958), pp. 162-167.

Much of what occurs under the term "juvenile delinquency" is a reaction of many intelligent boys and girls from financially stable homes who seek exit from their cramping inactivity through avenues of distracting excitement and time killing thrills.

We have had success in taming the great majority of our adolescents, not by the mistaken methods of totalitarian

regimentation, but by an equally inept method of depriving them of any sense of true authority, of being guided and being challenged by new ideas and visions; we have left them almost completely to themselves in an atmosphere of unmanageable and meaningless freedom.

There is also a deep inner conflict in our society, that we still cherish and acclaim ideals of a widely expansive community while actually living in the limitations, restraints, and securities of a static society.

The new democracy resulted in a leveling process which confuses the socially acceptable with the absolutely valid and thus forebodes the actual loss of the ideal. There is education in efficiency and living in society, but too little education of mind and almost no education of heart. The Churches have also helped to create this situation. The isolated boy or girl, the potential delinquent, find in most congregations the same social barriers which prevent him from really becoming part of other communities.

The young generation should gradually be led out of the atmosphere of loafing and waiting into a situation of serious work and responsibility. If religion cannot be taught at school, then study of ethics should be taken up seriously. And finally, unless there is a fundamentally reorientation of ideals and values in our society, this growing problem will continue to grow. The ideal of the "successful" man is outdated because our society becomes more and more static.—Setijadi.

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JOSEPH D. LOHMAN, "A Sociologist-Sheriff Speaks Out about Juvenile Delinquency," *Phi Delta Kappan*, 39 (February, 1958), pp. 206-214.

The juvenile offenders are not unlike other children, but they are product of a social process that results from malfunctioning or covert disfunctioning of traditional agencies dealing with children.

The problem must be attacked where the delinquency is produced and this involves two major considerations. In preventive terms, a major focus should be directed against these areas and regions which are disproportionately productive of crime and delinquency. And secondly, we must reexamine and increase the capacity of the agencies of the criminal justice which now too frequently aggravate the problem by the purely negative measures of arrest and detention.

Then the writer deals with the changing family patterns, the gang, the school, the police and the courts, and the public myths, and how they contribute to juvenile delinquency.

Prevention and effective treatment require that delinquency be recognized in generic terms; that its processes and relationships be grasped; and that it be dealt with as a problem of national proportion.

A nicely written article that gives you a clear picture of the social causes of delinquency. The reading of the article is highly recommended.—Setijadi

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ROBERT H. PITT II, "Higher Education for All?" *Journal of the National Association of Women Deans and Counselors*, XXI (January, 1958), pp. 62-66.

The basic premises here which are concerned with the goals of higher education is a comparison of higher education with art. Like art higher education should strive for these goals. First, it should serve to depict life itself. Secondly, it should provide for an aesthetic thrill. Lastly, it should strive for a penetration beyond reality.

Many people cannot go beyond the first stage, that of learning the useful, the depiction of life itself. For them post-secondary education must not go beyond vocational training.

Increasingly in this country there exist social and economic forces which play upon the minds of our people and their youngsters and lead them to aspire to a college or university edu-

cation for which they are not remotely qualified.

Should we not help our people to recognize their true abilities rather than have them, or us, give in to social and environmental pressure to do what they cannot do? Can we develop an educational system at the higher level equally adequate for the less able as we have already done for the more able?

The universities and liberal arts college should provide for the existence side by side on the campus for all three of the above mentioned experiences. They can only serve most productively when serving together.

There is a serious question whether or not this system of higher education as we now know can survive if it attempts to educate all who desire it and whether, even if possible, it is wise to do so.—Setijadi

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ANTHONY C. RICCIO, "Realistic Career Choosing in the Small College," *The Catholic Educational Review*, 56 (February, 1958), pp. 89-98.

"Investigators doing research in the last two decades have repeatedly arrived at the conclusion that college students do not make realistic career choices."

Some writers have stated that the college should shoulder some of the blame for this situation, and that the college should attempt to assist students to make intelligent career choices.

The purpose of this article was to consider some of the means whereby the colleges can assist students, especially freshmen to think wisely about careers. "... Emphasis will be placed on the relationship which exists between intelligent thinking about careers and resources available in the immediate small-college situation. . . , the small college enjoys a number of advantages over the large school when it comes to dealing with the particular problems of students."

" . . . Reading and experience lead the writer to believe that there are five general sources from which the student can receive aid in making a career choice: (1) an effective testing program, (2) a series of lecture-discussions on departmental offerings, (3) the library, (4) work experience provided by the college, and (5) the placement program."—Edward J. Brantley

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JOSEPH R. CAUTELA, "Misconceptions: Intelligence and the I.Q.," *Education*, 78 (January, 1958), pp. 300-303.

Nine answers are given to the question, "What is the nature of this attribute (intelligence)?" Then the author explains why these answers are "circular."

Various ways of deriving the IQ are discussed and Cautela explains why the definition of IQ which he gives is "more realistic and less misleading."

The author also discusses, "Is I.Q. Normally Distributed?"; "Does I.Q. Remain Constant?"; and "Some Other Misconceptions Concerning the I.Q."

"The definitions of intelligence really only designate the tasks involved where individuals differ. They do not tell us anything about the nature of that ability to perform these tasks." "A great deal of misunderstanding concerning the interpretation and use of IQ has arisen because of the lack of knowledge, by many people who use these tests, as to how the test constructor develops and defines the IQ"—Edward J. Brantley

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HELEN M. SMITH, "Requirements for Business Teacher Certification, State By State," *Business Education World*, 38 (February, 1958), pp. 17-22.

Tabulated within a chart, the requirements are listed by type and term of certificate, number of hours needed in a commercial major, the minimum hours required in separate

fields to be included in the major, and graduate work required.

The author asks the question, "How good is a teacher who does not have first-hand experience on which to base his teaching?" She discusses the paucity of business-experience required for certification.—Edward J. Brantley

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EVELYN G. WATERMAN, "Part-time Jobs for Students," *N.E.A. Journal*, 47 (January, 1958), p. 34.

In the November, 1957, issue of the *N.E.A. Journal* Martin Katz in an article, "No Time for Youth," gave the impression that students should not work part-time because it interfered with their school work. He said that 80% of the urban high school children over 16 years of age hold down regular part-time jobs which along with classes exceeded 60 hours per week per pupil.

Miss Waterman takes exception to this idea and offers her views. She points out that in Michigan a minor can work and go to school only a combined 48 hours per week. This law is enforced. She points out that the Cooperative Training Program in Battle Creek High School is considered so important that it is subsidized with federal funds. There were 116 schools in Michigan who offered the supervised training program with 9,092 students participating.

Objectives of the program are to teach habits, attitudes, and skills that are considered desirable in the job. The combination of part school and part work is right to keep some students from dropping out. Careful placement is done and there is close supervision and coordination with the employer. Students earn the prevailing wage. The employer submits a rating sheet several times a year which is used to determine marks.

The program provides gradual transition from high school to the adult world and both students and employers play a major role in bringing about the adjustment.—J. G. Hause



H. A. JEEP, and J. W. HOLLIS,
"Group Dynamics in Action,"
The Clearing House, 32 (December, 1957), pp. 223-229.

"The fear is often expressed that the mutual understanding and sharing between the individual and the group which usually result from the use of group dynamics will bring about conformity and common thinking on the part of all the members of the group. From our experience, just the opposite is true." "... It is the responsibility of each individual not to conform but to share, and to make available to the group his unique contributions."

The authors list forty-six principles for use of group dynamics; then they conclude that group dynamics, (1) "... helps individuals to grow toward independence and self-security while at the same time learning that in a society one member depends upon another."; (2) "... enables students to release their feelings and aggressions and thus increases their chances for individual and social adjustment."; (3) "... creates a situation in which the individual is responsible and his ego involved. . . ."; (4) "... is an energy-consuming, but very rewarding, method for both students and teachers."—Edward J. Brantley



C. B. MERRIT, "The Use of Tests in Secondary Schools," *The High School Journal*, 41 (December, 1957), pp. 66-70.

Prerequisites to the effective use of test results:

1. Cooperation with test producers is especially necessary in the construction of achievement tests, where the teacher has the opportunity to offer suggestions and criticisms in test construction.

2. The training of test users should include the few elementary statistical concepts necessary to properly interpret the score.

3. The testing program must have continuity. When more than one test is used, care should be taken to insure that the norm groups are comparably administered.

4. The test must be administered and scored carefully and the results made available in understandable form.

5. Improvement of the validity of tests are necessary, but we must go ahead and learn what the deficiencies of particular tests are and what precautions are necessary for their proper interpretation.

Some particular uses of tests:

1. Test information can be used effectively for adapting teaching to the abilities of the learner. Test results may also be used to determine the effectiveness of the instructional procedures.

2. The use of tests for guidance purposes is generally undertaken to aid students in realistically appraising themselves so that sound decisions may be made. Overemphasis on the predictive value of test results and assuming that test results are very accurate are the pitfalls in this area.—Setijadi



HARVEY F. GARDENER, "Time Allotments in Guidance," *The Journal of Educational Sociology*, 31 (November, 1957), pp. 130-133.

The amount of time allotted to guidance in each area would differ according to the time of year. For instance, testing would be quite heavy in the fall. Gardener surveyed ten high schools in southern Illinois in an attempt to find out how much time was used in each area.

He chose only high schools which had organized guidance programs and qualified guidance personnel. The guidance personnel kept track of the time utilized in each area for one month, April 23, 1956 to May 18, 1956.

During that period the ten schools reported that they had devoted 1,089 hours to guidance. The proportion of time used in each area is as follows: Testing (administration, scoring and

tabulating, analysis of test results)—26%; Records (record keeping, letter writing, filing)—14%; Counseling (individual, group, advisement)—36%; and Professional contacts (teachers, administrators, parents, others)—18%. Follow-up study took 1% of the time; research excluding follow-up took 3.7%; community speaking engagements took 1.3%; and miscellaneous and approximations comprised the other 1%.

The author realizes that the same study should be done at different times during the year in order to give a total picture of time allotment.—J. G. Hause

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L. S. HADLEY, "New College Students Lack Study Techniques," *School and Society*, 85 (November 23, 1957), pp. 353-354.

Few students entering college experience academic success commensurate with their measurable potentialities. Hadley, Director of Student Advising, Kent (Ohio) State University, estimates that 95% of those entering college lack adequate study skills. High school students are not accustomed to studying outside of the organized study hall.

Few college students have reading speeds and comprehension skills adequate to handle all college assignments. They can't take notes. They have difficulty with essay type tests because they can't organize their thoughts.

He states further that some students learn study habits rapidly, others learn through frustration, and some never acquire them. The college student must initiate his own program of self improvement. If he can take a course on how to study, he will get out of it only what he wants to. He may read all suggestions for improvement, but he must be motivated to try some of the program of improvement. After counseling, he must be experimental in trying to develop new techniques.

There are no shortcuts to success in improved reading or other study

skills. The mature student attempts to live up to his potentialities most of the time without any "outstanding prodding."—J. G. Hause

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ARTHUR SMITH and JANE JOSSE, "Some Social-Psychological Aspects of the High School Orientation Program," *The Journal of Educational Sociology*, 31 (November, 1957), pp. 99-106.

There is much insecurity exhibited by beginning freshmen as a result of conflict produced by changing membership in groups. An effective orientation program designed to reduce conflict must be based upon the social-psychological principles involved in changing group membership and the effect upon the individual.

There are all kinds of orientation programs. The most effective program needs to be developed according to the particular condition of each community and high school population.

There are certain basic procedures which must be followed. They are (1) an attempt to establish through teachers and parents a frame of reference in which the high school is perceived as a step in the growing-up process which is worthy of recognition; (2) an attempt to ascertain the prevailing frames of reference among the new people about the specifics of the new high school so that misconceptions may be corrected; (3) opportunities for students to observe future roles; (4) provisions for status-giving activities for all new students to demonstrate their competence; and (5) activities designed to assist the student in learning both real and ideal norms of the student body.—J. G. Hause

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HARRY A. GRACE & NANCY LON BOOTH, "Is the 'Gifted' Child a Social Isolate?" *Peabody Journal of Education*, 35 (January, 1958), pp. 195-196.

This study is based on a survey of 294 elementary school children in all

six grades. Three questions were pre-tested and then asked: "Which three children in your room do the best schoolwork?," "Which three children in your room do you do things with most often?," "If you could sit near any three children you want to, whom would you choose?"

The "giftedness" was based on the results of the Iowa Basic Skills Test.

Is the gifted child the social isolate? Not within these six grades of an urban school. Perhaps as an important consideration is that one third of the gifted children do not demonstrate their abilities in the classroom such that their fellow pupils notice them.

But the least gifted children do seem to be left out of it, even as early as the first grades.—Setijadi

* * *

JAMES D. FINN, "Automation and Education: I. General Aspects," Audio Visual Communications Review, 1 (Winter, 1957).

The first in series of three articles opens up the consideration of the effects of automation on education. The author states the dilemma of education is to produce specialists and technicians who are at the same time broad enough to function as parents and citizens since survival demands top technicians.

The challenge to curriculum makers is inescapable—under automation, a school could do a student no greater service than to prepare him, as so many do today, for his first job. If there is one thing that is certain, it is that the job—even the bottom job—will change radically and often.

Thought provoking and sure to raise a few hackles.—Paul E. Lappala

* * *

and these also . . .

"Should Religion Be Taught in the Public Schools?" in *January Social Studies* . . . "Challenging Above-

Average Pupils" in *January Social Education* . . . "The Child Guidance Clinic: A Mental Health Service Agency and an Aid to Teacher Education" in November *Journal of Educational Sociology* . . . "Money is Not Enough" in February 1 *Saturday Review* . . . "Marriage and Careers for Girls, A New Study of Work-Life Patterns of Woman Throws Light on an Old Problem" in December *Occupational Outlook* . . . "Morale" by Thomas H. Biggs in January *Educational Forum* . . . "Gradeless Classes" in February *American School Board Journal* . . . "The College Board Advanced Placement Program—A Progress Report" in *California Journal of Secondary Education* . . . "Where Did You Go? 'Out.' 'What Did You Do?' 'Nothing.'" in December *Reader's Digest* . . . "Guidance in the Two-Year College: A Neglected Area" in March *Junior College Journal* . . . "Issues in Educational Guidance" in January *Journal of the National Association of Women Deans and Counselors* . . . "Policy Statement Regarding Nation-Wide Testing of Students" in February *Counseling News and Views* . . . "Better Interviewing Techniques" in February *Adult Leadership* . . . "The Mechanics of Study Procedure" in January *California Journal of Educational Research* . . . "Behavior Problems of Children From Broken and Intact Homes" in November *Journal of Educational Sociology* . . . "Guidance of the Primary Child" in December *American Childhood* . . . "Attitudes Toward Working for the Federal Government" in *Personnel Administration* . . . "Social Status of Children Related to Intelligence, Propinquity, and Social Perception" in January *Elementary Journal* . . . "The Relation Between Teachers' Judgements of Pupils' Sociometric Status and Intelligence" in February *Elementary Journal* . . . "The Effect of Automation on Business Teachers" in February *Balance Sheet* . . . "Curriculum Problems Presented by Poor Readers" in *The February Reading Teacher*.



Current Occupational Literature

MEMBERS of the Guidance Information Review Service are: Wilma Bennett, Covina Union High School, California; Irene Feltman, New Haven State Teachers College; Dean Hummell, Ohio State Department of Education; Ward Leis, Pasadena City Schools; Richard Rundquist, University of Kansas; Robert Shostek, B'nai B'rith Vocational Service Bureau; Buford Steffle, Michigan State University; and Harold Munson (Chairman), New York State Department of Education.

Subject headings have been adopted, with permission of the author, from *Occupations Filing Plan*, Wilma Bennett, 1958, Sterling Powers Publishing Co., 2823 Gage Avenue, Huntington Park, California.

Each item listed has been classified and coded in accordance with the following system:

Type of Publication

- A—Career fiction
- B—Biography
- C—Occupational monograph

- D—Occupational brief
- E—Occupational abstract
- F—Occupational guide
- G—Job series
- H—Business and industrial descriptive literature
- I—Occupational or industrial description
- J—Recruitment literature
- K—Poster or chart
- L—Article or reprint
- M—Community survey, economic report, job analysis
- N—Other



Recommendation

1. Highly recommended (maximum adherence to NVGA standards).
2. Recommended (general adherence to NVGA Standards).
3. Useful (while because limited in scope it does not meet NVGA Standards, contains authentic, objective, timely, and helpful information).

ADVERTISING

Advertising Copy Writer, Splaver, Sarah, Personnel Services, Inc., 1957, 6 pp. 50¢. E-1.

Advertising—The Advertising Business and Its Career Opportunities, American Association of Advertising Agencies, Inc., 1956, 16 pp. 10¢. C-2.

Lee Devins, Copywriter, Mannix, Mary, Julian Messner, Inc., 1957, 187 pp. \$2.95. A-3.

Public Relations Workers

Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

AGRICULTURE

- Bulletin Agriculture, 1956-57*, College of Agriculture, University of California, 1956, 226 pp. Free. G-2.
Career Opportunities in Agriculture Improving, University of California (Davis), 1957, 1 p. Free. N-3.
County Extension Workers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.
Entrance Information for High School Students, College of Agriculture, University of California, (Los Angeles), 1 p. N-3.
Opportunities in Agriculture, Agricultural Publications of University of California, 1955, 32 pp. F-1.
Training at Davis for Careers in Irrigation, Department of Irrigation, University of California (Davis), Folder. J-2.

AGRICULTURE-ANIMAL AND LIVESTOCK FARMING

- Your Future in Agronomy*, College of Agriculture, University of California (Davis), 1954, 6 pp. F-3.

AIRCRAFT MANUFACTURING INDUSTRY

- Aircraft Manufacturing Workers*, Science Research Associates, 1955, 4 pp. Subscription Service. D-2.
The Engineering Professions in Aviation, Institute of Aeronautical Sciences, 1957. 36 pp. C-1.
Your Career As An Engineer in Aviation, Institute of the Aeronautical Sciences, 1956, 20 pp. I-1.

AIR TRANSPORTATION

- Airline Hostesses*, Science Research Associates, 1956, 4 pp. Subscription Service. D-1.
Career Opportunities With the Airlines, Mehrens, Harold E. and members of the Air Transport Association Staff, Air Transport Association of America, 75 pp. C-1.

ALUMINUM PRODUCTS INDUSTRY

- Aluminum Industry Workers*, Science Research Associates, 1956, 4 pp. Subscription Service. D-2.

ARCHITECTURE

- Lady Architect*, Wyndham, Lee, Julian Messner, Inc., 1957, 187 pp. \$2.95. A-3.
1957-58 List of Accredited Schools of Architecture, National Architectural Accrediting Board, 1957, 1 p. Free. N-3.

ART

- The Fine Artist*, Ely, Anne C. and Small, Verna, Street and Smith Publishers, 1957, 8 pp. 25¢. L-1.

AUTOMOBILE INDUSTRY AND SERVICES

- Automobile-Body Repairman*, Michigan Employment Security Commission, U. S. Employment Service Division, 1956, 20 pp. 25¢. F-1.
Automobile Design, Pratt Institute, School of Engineering, 1955, 4 pp. Free. D-3.
Automobile Manufacturing Workers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.
Automobile Mechanics, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.
Automobile Sales and Service Workers, Science Research Associates, 1956, 4 pp. Subscription Service. D-1.

BARBERING AND BEAUTY SHOP WORK

- Beauty Operators*, Science Research Associates, 1956, 4 pp. Subscription Service. D-1.

BUSINESS

- Credit Workers*, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.
Managers and Executives, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.
Purchasing Agents and Merchandise Buyers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

CANNING AND PRESERVING INDUSTRY

Frozen Foods Industry Workers, Science Research Associates, 1956, 4 pp. Subscription Service. D-1.

CARTOGRAPHY

Cartography, Bauer, Hubert, Bellman Publishing Co., 1957, 32 pp. \$1.00. C-1.

CERAMICS INDUSTRIES

Structural Clay Products Manufacturing Workers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

CHIROPODY

Careers in Chiropody, Shosteck, Robert and Rubin, A., B'nai B'rith, Vocational Service, 1957, 11 pp. 25¢. D-1.

Chiropodist, Office of Education, Guidance and Student Personnel Section, U. S. Department of Health, Education and Welfare, 1 p. F-2.

Chiropody As a Career, Belleau, Wilfred E., Park Publishing House, 1957, 27 pp. 75¢. C-1.

Stepping Up to a Career, National Association of Chiropodists, 6 pp. F-2.

CIVIL SERVICE

Public Administration Workers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

Women in the Federal Service, 1954, Women's Bureau, U. S. Department of Labor, U. S. Government Printing Office, 1957, 19 pp. 15¢. C-1.

CONSTRUCTION INDUSTRY

Building Construction Careers, Chronicle Guidance Publications, 1957, 2 pp. 15¢. K-1.

Building Construction Careers, Chronicle Guidance Publications, 1957, 4 pp. 35¢. D-1.

Construction Painter, Chronicle Guidance Publications, 1957, 4 pp. 35¢. D-1.

Opportunities for Construction Painters, Chronicle Guidance Publications, 1957, 2 pp. 15¢. K-1.

Painters and Paper Hangers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

Plumbers and Pipe Fitters, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

Road Construction Workers, Science Research Associates, 1955, 4 pp. Subscription Service. D-1.

DAIRY PRODUCTS INDUSTRY

A Career in the Dairy Industry, California Dairy Council, 10 pp. J-2.

DANCING AND SKATING

A Dancer's World, Moss, Allyn, Street and Smith Publishers, 1957, 8 pp. 25¢. L-2.

ELECTRICIAN

Opportunities for Construction Electricians, Chronicle Guidance Publications, 1957, 1 p. Subscription Service. 15¢. K-2.

ENGINEERING

Opportunities for Engineers, Chronicle Guidance Publications, 1957, 1 pp. (Wall Chart). Subscription Service. 15¢. K-3.

Industry Engineers Get Top Pay, "Electronics," Chronicle Guidance Publications, Reprint Service, 1957, 2 pp. Subscription Service. 15¢. L-2.

ENGINEERING, CIVIL

Civil Engineer, Chronicle Guidance Publications, 1957, 4 pp. 35¢. E-2.

FINANCE

Employment Opportunities for Business Administration Graduates in the Small Bank, Chronicle Guidance Publications Reprint Service, 1957, 2 pp. Subscription. L-2.

FOOD PROCESSING AND PRODUCTION

Careers in Food Preparing, B'nai B'rith Vocational Service, 1957, 15 pp. 25¢. D-2.

- Students View the Food Broker*, National Food Brokers Association, 1957, 23 pp. Free. L-2.
- History Defines the Food Broker*, National Food Brokers Association, 1957, 10 pp. Free. N-3.
- FOOD TECHNOLOGY AND RESEARCH**
- Career as Food Technologist*, B'nai B'rith Vocational Service, 1957, 11 pp. 25¢. D-2.
- FOREIGN COUNTRIES, WORK IN**
- Scandinavian Job Hunt*, "Mademoiselle," Alumnae Advisory Center, 1957, 8 pp. 25¢. D-2.
- FOREIGN SERVICE**
- The Functions of the Diplomat*, "Foreign Service Journal," Chronicle Guidance Publications Reprint Service, 1957, 2 pp. Subscription. L-3.
- The American Agricultural Attache*, Department of State Publication 6422, U. S. Government Printing Office, 1957, 23 pp. 15¢. C-1.
- Opportunity For You—Student Trainee Jobs*, Forest Service Publication MP-726, U. S. Government Printing Office, 1957, 3 pp. Free. J-2.
- HORTICULTURE**
- Orchids for April*, Freer, Marjorie Mueller, Julian Messner, Inc., 1957, 185 pp. \$2.95. A-3.
- HOTEL WORK**
- The Motel Market—Sales Analysis*, The Patterson Publishing Company, 1956, 35 pp. Free. N-2.
- JEWELRY AND WATCHMAKING**
- Jeweler and Watchmaker*, Chronicle Guidance Publications, 1957, 4 pp. 35¢. E-2.
- LAW**
- Lawyer*, Careers, 1957, 7 pp. 25¢. D-1.
- LIBRARY WORK**
- Bookmobile Librarian*, Robinson, H. Alan, Personnel Services, Inc., 1957, 6 pp. 50¢. E-2.
- Should You Be a Librarian*, Frechafer, Edward G., New York Life Insurance Company, 1957, 5 pp. Free. D-3.
- The Training of the Clerical Librarians: A Challenge and an Opportunity*, Sheva, J. H., Chronicle Guidance Publications, 1957, 2 pp. Subscription Service. L-3.
- To Be a Librarian*, American Library Associates, 18 pp. Free. J-2.
- LUMBER AND FOREST PRODUCTS INDUSTRIES**
- Lumbermen*, Science Research Associates, 1955, 4 pp. Subscription Service. D-2.
- Woodsmen*, Goulet, E. R., The Guidance Centre, 1957, 4 pp. 13¢. D-2.
- MACHINE SHOP WORK**
- Machinist*, Chronicle Guidance Publications, 1957, 4 pp. 35¢. D-1.
- Opportunities—Machinist*, Chronicle Guidance Publications, 1957, 1 pp. 65¢. K-2.
- Semi-Skilled Machine Tool Operators*, Chronicle Guidance Publications, 1958, 4 pp. 35¢. D-1.
- MANUFACTURING**
- Millwright*, Science Research Associates, 1957, 4 pp. Subscription Service. D-1.
- Musical Instrument Manufacturing Workers*, Science Research Associates, 1957, 4 pp. Subscription Service. D-2.
- Production Jobs*, Careers, 1957, 1 p. L-3.
- Skilled Workers Needed in Push-Button Plants*, Chronicle Guidance Service, 1956, 4 pp. Subscription Service. 15¢. M-2.
- MATHEMATICAL WORK**
- Career Possibilities for Those Interested in Mathematics*, Careers, 1957, 1 p. K-1.
- Is Math in the Stars for You*, Department of Labor, Women's Bureau, 1957, 5 pp. 5¢. F-3.

- Mathematicians*, Science Research Associates, 1958, 4 pp. Subscription Service. D-2.
- MEDICAL OCCUPATIONS**
Career as Orthoptic Technician, Chronicle Guidance Publications, 4 pp. 35¢. D-1.
Career Possibilities for Those Interested in Medical Work, Careers, 1957, 1 p. K-1.
- MEDICAL TECHNOLOGY**
Should You Be a Medical Technologist, Street, Charlotte, New York Life Insurance Company, 1957, 10 pp. Free. D-1.
- MEDICINE AND SURGERY**
Physicians, Science Research Associates, 1958, 4 pp. Subscription Service. D-2.
- METEOROLOGY**
Graduate Program in Applied Meteorology Established at University of Michigan, American Meteorological Society, 1956, 1 p. M-3.
Meteorologists, Science Research Associates, 1958, 4 pp. Subscription Service. D-2.
- MILITARY SERVICE—MARINE CORPS**
Your Son Can Be An Officer, Chronicle Guidance Publication, 1957, 4 pp. Subscription Service. 15¢. L-3.
- MILITARY SERVICE—NAVY**
Navy ROTC, Smith, Leslie S., Careers, 1957, 4 pp. L-2.
- MINERAL INDUSTRIES**
The Salt Industry, Wilcox, Wendell G., Bellman Publishing Company, 1958, 31 pp. \$1.00. H-3.
- MINING AND METALLURGY**
The Coal Industry, Speare, M. Edmund, Bellman Publishing Company, 1957, 32 pp. \$1.00. H-2.
- MODELING**
Modeling, Walburn, Nancy Woods, Street and Smith Publications, Inc., 1957, 4 pp. 25¢. F-1.
- MOTION PICTURE INDUSTRY**
Motion Picture Industry Workers, Science Research Associates, 1958, 4 pp. Subscription Service. H-2.
Theater Manager, Science Research Associates, 1956, 4 pp. Subscription Service. D-1.
- MOTOR TRANSPORTATION**
Local Transportation Workers, Science Research Associates, 1957, 4 pp. Subscription Service. D-2.
- MUSIC**
Musicians, Science Research Associates, 1956, 4 pp. Subscription Service. D-3.
- NEWSPAPER WORK**
Journalism, Chronicle Guidance Publications, 1957, 4 pp. 35¢. D-1.
Journalist, Careers, 1957, 7 pp. 25¢. D-1.
Open the Door to Your Future As a Journalist, Chronicle Guidance Publications, 1957, 1 p. 65¢. K-2.
Opportunities for Journalist, Careers, 1957, 1 p. K-1.
Wire Service Reporting, Greene, Gael, Street and Smith Publications, 1957, 3 pp. 25¢. L-1.
- NURSING**
Nurses for a Growing Nation, National League for Nursing, 1957, 31 pp. M-1.
Nursing, Schulz, Cecilia, Bellman Publishing Company, 1958, 24 pp. \$1.00. C-2.
The Nurse Brigade, Bernstein, Mary S., Chronicle Guidance Publications, 1957, 3 pp. Subscription Service. 15¢. L-2.

NURSING—PRACTICAL NURSE

Practical Nurses, Science Research Associates, 1956, 4 pp. Subscription Service. D-2.

OSTEOPATHY

Careers in Osteopathy, Shosteck, Robert, B'nai B'rith Vocational Service, 1957, 12 pp. 25¢. D-3.

PAINT AND VARNISH INDUSTRY

Paint, Varnish, and Lacquer Industry Workers, Science Research Associates, 1957, 4 pp. Subscription Service. D-2.

PAPER AND PULP INDUSTRY

Paper and Pulp Industry Workers, Science Research Associates, 1957, 4 pp. Subscription Service. D-1.

PERSONNEL WORK

Careers in Personnel Management, Angel, Juvenal L., World Trade Academy Press, Inc., 1957, 28 pp. \$1.00. C-2.

PHOTOGRAPHY

Photographic Film Industry Workers, Science Research Associates, 1957, 4 pp. Subscription Service. D-2.

PHYSICAL THERAPY

Laurie, Physical Therapist, Hobart, Lois, Julian Messner, Inc., 1957, 192 pp. \$2.95. A-2.

PRINTING AND PUBLISHING

Careers in the Field of Printing, Angel, Juvenal L., World Trade Academy Press, Inc., 1957, 26 pp. \$1.00. C-2.

PSYCHIATRY

The Woman Psychoanalyst, Lynch, Nancy, "Mademoiselle" Magazine, Alumnae Advisory Center, 1957, 4 pp. 25¢. L-3.

PSYCHOLOGICAL WORK

Careers in Psychology, Horlick, Reuben S., B'nai B'rith Vocational Service, 1957, 15 pp. 25¢. D-3.

PUBLIC OFFICE

The Federal Government Service, American Assembly, 1955, 189 pp. \$1.00. N-1.

RADIO AND TELEVISION

Radio and TV Broadcasting Technicians, Chronicle Guidance Publications, 1957, 4 pp. 35¢. D-2.

RAILROAD WORK

The American Railway Industry, Corliss, Carlton J., Bellman Publishing Company, 1957, 32 pp. \$1.00. C-2.

COLLECTIONS

College Gateways to Careers, Oklahoma Agriculture and Mech. College, 1955, 122 pp. Free. J-3.

Head, Heart and Hand, Gray, Robert M., Simmons College, 1955, 13 pp. Free. J-3.

Professional and Semiprofessional Occupations—Job Facts Chart No. 14, Science Research Assoc., 1956, 1 p. 50¢. K-2.

Professional and Semiprofessional Occupations—Job Facts Chart No. 15, Science Research Assoc., 1956, 1 p. 50¢. K-2.

Professional and Semiprofessional Occupations—Job Facts Chart No. 21, Science Research Assoc., 1957, 1 p. 50¢. K-2.

Semiskilled and Skilled Occupation—Job Facts Chart No. 20, Science Research Assoc., 1957, 1 p. 50¢. K-2.

Training Programs, "Mademoiselle" Magazine, 1957, 6 pp. N-3.

GENERAL SOURCES OF OCCUPATIONAL INFORMATION

Guide to Career Information, Career Information Service, New York Life Insurance Company, 1957, 203 pp. \$3.00. N-1.

JOBS FOR WOMEN

Job Horizons for the College Woman, Women's Bureau, U. S. Dept. of Labor, U. S. Government Printing Office, 1956, 53 pp. 25¢. N-3.

Women Certified Public Accountants, American Women's Society of Certified Public Accountants, 1956, 14 pp. M-1.

SCHOOL SUBJECTS AND JOBS

Occupations to Which Interest and Ability in Industrial Arts May Lead, Chronicle Guidance Publications, 1 p. 65¢. K-3.

Occupations to Which Interest and Ability in General Science May Lead, Chronicle Guidance Publications, 1957, 1 p. 65¢. K-2.

Publishers' Index

Agricultural Publications of University of California, 22 Giannini Hall, University of California, Berkeley, California.

Air Transport Association of America, 1107 Sixteenth Street, N. W., Washington, D. C.

Alumnae Advisory Center, 541 Madison Ave., New York 22, New York.

American Assembly, Columbia University, New York 27, New York.

American Association of Advertising Agencies, 420 Lexington Avenue, New York, New York.

American Library Association, Chicago, Illinois.

American Meteorological Society, 3 Joy St., Boston 8, Massachusetts.

American Women's Society of Certified Public Accountants, 327 South LaSalle Street, Chicago 4, Illinois.

Bellman Publishing Company, Cambridge 38, Massachusetts.

B'nai B'rith Vocational Service, 1129 Vermont Avenue, N. W., Washington 5, D. C.

California Dairy Council, 593 Market Street, San Francisco, California.

Careers, Largo, Florida.

Chronicle Guidance Publications, Moravia, New York.

Guidance Centre, 371 Bloor Street, West, Toronto 5, Canada.

Institute of The Aeronautical Sciences, 2 East 64th Street, New York 21, New York.

Julian Messner, Inc., 8 West 40th Street, New York 18, New York.

Mademoiselle, 575 Madison Avenue, New York 22, New York.

Michigan Employment Security Commission, Occupational Research Unit, 7310 Woodward Avenue, Detroit 2, Michigan.

National Architectural Accrediting Board, Elliot L. Whitaker, Secretary, School of Architecture, Ohio State University, Columbus 10, Ohio.

National Association of Chiropractors, 3301 Sixteenth Street, N. W., Washington 10, D. C.

National Food Brokers Association, 527 Munsey Bldg., Washington 4, D. C.

New York Life Insurance Company, 51 Madison Avenue, New York 10, New York.

Oklahoma Agri. and Mech. College, Stillwater, Oklahoma.

Park Publishing House, 4141 West Vliet Street, Milwaukee 8, Wisconsin.

Patterson Publishing Company, 5 South Wabash Ave., Chicago 3, Illinois.

Personnel Services, Inc., Peapack, New Jersey.

Pratt Institute, Brooklyn 5, New York.

Science Research Associates, 57 West Grand Avenue, Chicago 10, Illinois.

Simmons College, Boston, Massachusetts.

Street and Smith Publishers, 575 Madison Avenue, New York 22, New York.

Superintendent of Documents, U. S. Gov't. Ptg. Office, Washington 25, D. C.

Surgeon General, Department of the Army, Washington 25, D. C.

University of California, Berkeley, California.

University of California, Davis, California.

University of California, Los Angeles, California.

University of Chicago, Chicago 37, Illinois.

U. S. Department of Health, Education and Welfare, Washington 25, D. C.

World Trade Academy Press, Inc., 3 East 48th Street, New York 17, New York.

Cooperative Action Against the Mechanic Shortage

from the AUTOMOBILE MANUFACTURERS ASSOCIATION*

THE AUTOMOTIVE industry has approved grants of funds totaling \$145,000 to three universities for scholarships and research aimed at relieving the nation-wide shortage of well-trained auto mechanics, Harry A. Williams, managing director of the Automobile Manufacturers Association announced in Detroit recently.

The shortage of trained auto mechanics has grown alarmingly in the postwar years.

To get back to the 1950 ratio of one mechanic per 73 motor vehicles, we will need to recruit 55 to 60 thousand new mechanics every year for the next 10 years. To hold our own at one mechanic per 87 vehicles, 40,000 a year will be needed—more than three times the number of mechanics being graduated from the nation's vocational schools today.

The purpose of the new grants is two-fold: (1) to encourage capable students to prepare themselves to teach auto mechanics in vocational schools, and (2) to learn, through research, the qualities and aptitudes that make a good candidate for mechanic training.

Directed toward the first goal, he said, are grants of \$2,500 each to Wayne State University and the University of Illinois, for scholarships to students studying to be automobile mechanics teachers.

To accomplish the second goal, funds totaling \$140,000 have been approved for use by the University of Michigan in conducting a seven-year research project to establish criteria for determining the qualifications of a good mechanic.

Vocational educators have found that many students entering automotive programs are not really fitted for the trade and stand little chance of success. On the other hand, well-qualified students often are guided into other fields.

This wasteful situation exists because no tested criteria on which to base such judgments has been made available to student counselors.

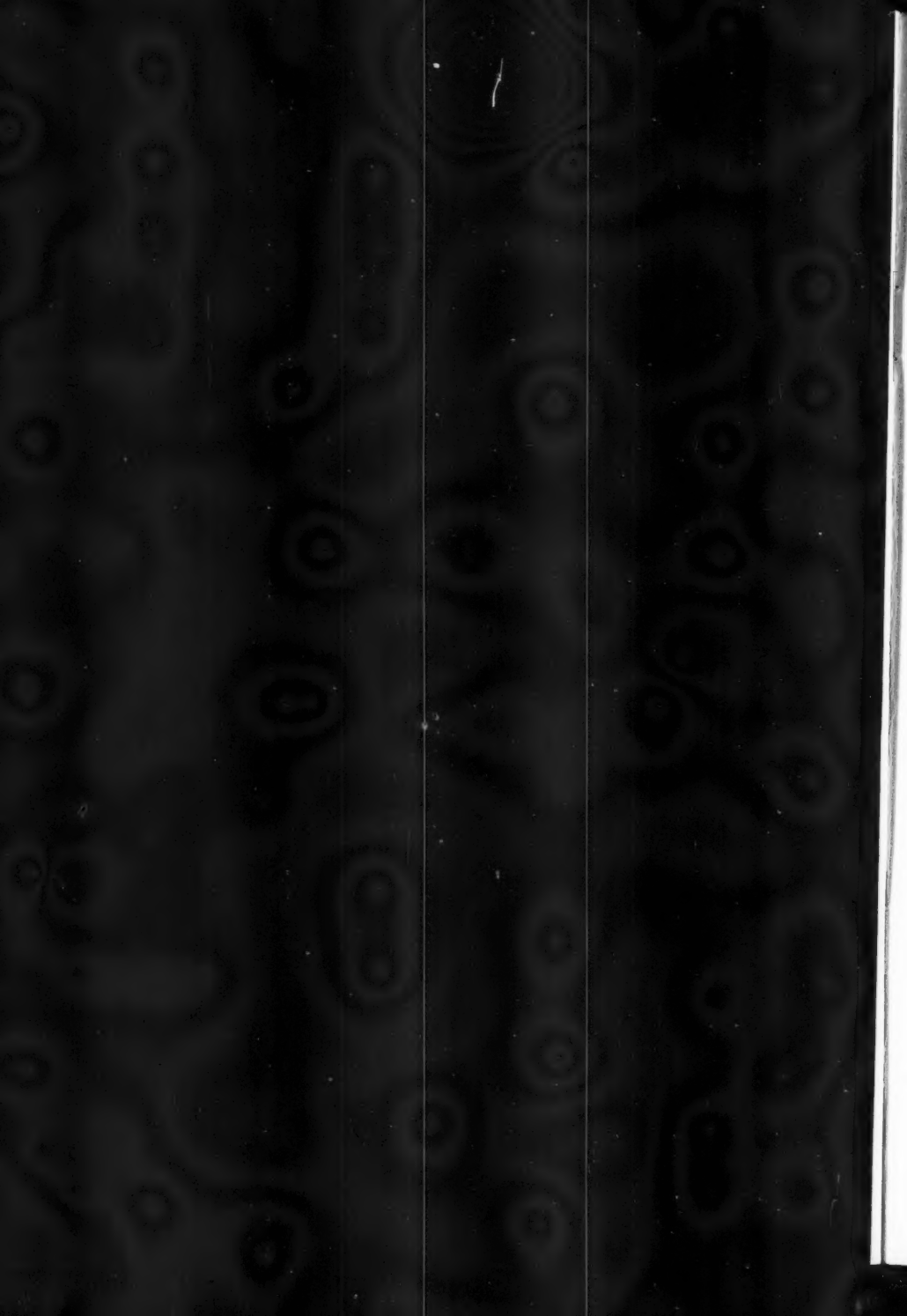
It will take seven years to complete because test students must be followed through their four-year vocational courses and early employment to determine the validity of the criteria.

The two projects are recommendations of the Automotive Industry-Vocational Education Conference, which has been working for 11 years to improve mechanic training in the schools and to increase the number and quality of young men entering the trade.

The Conference is a cooperative working group composed to representatives of the American Vocational Association and the Service Managers Committee of the Automobile Manufacturers Association.

* Excerpts from a January, 1958, News Release.

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National Vocational Guidance Association, Inc.

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Prediction of Occupational Adjustment: William Coleman, Rand Corporation, Santa Monica, Calif.

Rural Guidance: William Truax, East Texas State Teachers College, Commerce, Tex.

Vocational Counseling: Mildred Peters, Wayne State University, Detroit, Mich.

Women: Jane B. Berry, University of Kansas City, Kansas City, Mo.

Young Workers: E. Oren Hammond, Kansas City Public Schools, Kansas City, Mo.